Lecture
ON
LITHOTRITY AT A SINGLE SITTING.

WITH ADDITIONS, AND AN ANALYSIS OF 101 CASES.

Delivered at University College Hospital, Nov. 21st, 1880,

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PART II.

After-treatment.—When the patient has fully recovered from the ether—if suffering severely, say three or four hours after the operation, a condition by the way which is quite uncommon, a hot hip-bath, as hot as he can bear it for fifteen minutes, gives great relief. The treatment for the first three or four days in cases of large calculus is that of a mild acute cystitis: recumbent position, external warmth, frequent hot hip-baths, and small but frequent doses of solution of potash, just to neutralise the acidity of the urine. If the urethra is overstretched or bruised, an india-rubber catheter may be tied in for twenty-four hours or so, but this is not frequently necessary; while if the bladder had previously lost the power of emptying itself, such an inlying catheter for a day or two is mostly better than frequent catheterism.

There is one rather remarkable circumstance which I have met with in a considerable number of the cases referred to, and which I confess I am not quite able to account for. It happens in a large proportion during the three or four days immediately following the operation, that the relief is considerable, that the urine is clear, that the bladder tolerates a large quantity, and the aspect of the case is one of rapid and unchecked convalescence. But on the fourth or fifth day a little excitement appears, the bladder becomes irritable, the urine is cloudy, and after twenty-four hours or so subacute cystitis is established, often destined to be troublesome for a week or two. I have remarked these phenomena so frequently that it is impossible not to look for their occurrence; and I am satisfied now that they appear in spite of precautions, and are by no means necessarily the result of an imprudence on the part of the patient. The liability pointed out, however, indicates that it is most desirable to enjoin the recumbent position, confinement to the room, a warm temperature (in cold weather), and care in every particular of management for at least some days after crushing a calculus, whatever its size.

The next point to be considered is the mortality following the operation. As before stated, I have employed almost entirely the single sitting method during the last three years, operating on 101 consecutive cases of elderly men—that is, on 101 *separate individuals*, no one individual having required during that period to be operated on a second time.[1] I have included no case of mere phosphatic concretions, which frequently require to be crushed for patients who pass all their urine by catheter, urine which is alkaline and liable to deposit phosphates. These are not cases of "stone in the bladder," and have no right to be so regarded. The mean age of the 101 individuals is over sixty-two years and a half. The number of uric-acid calculi is 61, of oxalates 4, of mixed calculi 8, and of phosphates 28. *The number of deaths is three only.* This is a better result than I have ever before accomplished. I have operated on a similar number by the old method, once, with five deaths, but the average of upwards of 400 cases reported to the Royal Medical and Chirurgical Society was 7½ per cent. mortality. I am sanguine enough, therefore, to hope, judging from this experience, that the mortality of the stone operations is reducible by the single sitting method materially below that of any previous one. Never, I believe, has it in the history of surgery hitherto fallen to the lot of any man to operate for the stone on 101 elderly male patients with only three fatal cases. The once famous 84 cases of Martineau, with two deaths, contained only 24 over fifty years of age (only 11 indeed over sixty) *and in these the two deaths occurred.* A few among the rest were young men, *the majority were children*, and in these no deaths took place. Among Martineau's elderly patients the mortality was fully 8 per cent., an excellent result, and rarely attained by any of the older operators. The mortality now recorded in 101 consecutive adult cases of only 3 per cent. is, I confess, a better achievement than I had ever ventured to hope for.

I now come to the condition of the bladder subsequent to the operation, a question inseparable from lithotrity, long associated with cogent objections to it, and impeding its reception by surgeons during the earlier period of its history. For no one can deny that the operation of crushing the stone has heretofore been followed in certain exceptional cases by obstinate subacute cystitis with formation of phosphatic concretions, a condition demanding much patience and management to control, and which sometimes prove almost fruitless after all. The operations by repeated sittings, necessarily occupying with a large stone a period of fourteen to twenty-one days, and a much longer term in some hands, doubtless contributed to produce an unhealthy condition in some bladders which would not have been so affected had the stone been removed by lithotomy. Even after the cutting operation phosphatic cystitis is not unknown, although it is very uncommon. I have at this moment under my care an obstinate case which I cut eighteen months ago, the primary result being excellent.

Now, what is our experience of this complaint after lithotrity at a single sitting? It has been said, but I fear hastily, that this operation has banished these unhappy cases from practice. I regret to say, indeed, that so great an advance cannot be affirmed. I think one of the worst, one of the most persistent, examples of phosphatic cystitis I have seen of late years followed an operation in which I removed with great ease a small uric-acid calculus (eighty-four grains) in six minutes last October twelvemonth. Gradual improvement has taken place, but for a few months frequent micturition, much pain, and repeated production of phosphatic deposit were experienced. A similar case occurred about the same time, but this recovered soundly by the following spring. In four other cases of the series referred to there was persisting cystitis for three or four months after the operation, but not longer. All these are cases in which the calculus was uric acid, and cystitis was not present before the operation. When the calculus has been phosphatic, removed from a bladder habitually emptied by the catheter on account of large hypertrophy of the prostate, and cystitis has pre-existed, it is almost invariably much lessened by the operation; but its continued existence in such a case to some extent is often a necessary concomitant of the organic changes in the organs, and involves no discredit to the surgical procedure.

But I think I am justified in concluding that the occurrence of the morbid condition of the bladder following lithotrity for uric acid and oxalate of lime calculi in previously healthy organs, occurs less frequently now than heretofore. I venture to believe that the improvement in this respect may be considerable. In order to guard against the danger, our first care should be to avoid in every case where it is possible to do so the use of instruments, whether for crushing or evacuating, which over-distend and irritate the urethra and neck of the bladder. At least our rule must be not to employ larger instruments than the size of the stone demands. I cannot too earnestly warn the inexperienced lithotrist against the needless risk he incurs when, in presence of a small or moderate-sized stone (and the majority met with belong to one of these two categories), he uses the heavy lithotrite and the large evacuating tubes which have of late been introduced into this country. In order to remove two or three hundred grains of calculous matter from the bladder—and many calculi weigh less than a hundred grains, while all ought to be found before they attain that weight—it is wholly unnecessary, I will even say it is unwarrantable, to introduce lithotrites and evacuators with the diameter of No. 18 or 20 English scale into the bladder. I am certain that the mere splitting, for it is not dilatation, of the urethra and neck of the bladder, which sometimes follows the introduction of such instruments, has sufficed to produce symptoms often distressingly painful, sometimes obstinate in duration, occasionally fatal. Surely it is more prudent to

[1] Eighty-nine of these cases were reported, each one with the weight of stone and name of his medical attendant with whom I saw the case, in my paper on the subject at the International Medical Congress in August last. The twelve remaining cases have been operated on since.

bestow two or three minutes more on the work, to ensure more complete crushing, so that the débris may be removed by a tube of 15 or 16 English diameter, than to crush coarsely and use an evacuator which infallibly inflicts serious mischief in a certain proportion of cases.

I will briefly sum up our subject thus: Lithotrity completed at a single sitting is in experienced hands an operation unequalled in its safety for the patient.

It appears also to produce less subsequent persisting irritation of the bladder than the operation by several sittings.

No new form of instrument is required by this operation.

The value of the proceeding lies altogether in the removal of all the foreign matter from the bladder at once, so that nothing remains to excite inflammation in an organ already irritated by the process. And the less irritating the operation has been, the more certain and more speedy will be the recovery.

It should be employed by beginners only for calculi of moderate size when hard. If calculi are large as well as hard, a young surgeon will probably proceed more safely by lithotomy. In friable phosphatic calculi, size offers a much less serious difficulty. Lithotrity at a single sitting for a hard calculus, upwards of an ounce in weight, and *à fortiori*, when double that weight, certainly demands an experienced operator.

Lecture
ON THE
HISTORY OF DISCOVERIES CONCERNING THE CIRCULATION OF THE BLOOD,

INTRODUCTORY TO THE COURSE OF PHYSIOLOGY,

Delivered in the University of Edinburgh, Oct. 28th, 1881,

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PROFESSOR OF PHYSIOLOGY.

(Concluded from p. 5.)

WITH regard to the flow of blood in the veins, Harvey demonstrated that the blood flows only towards the heart. He opened the jugular vein in a living animal, and found that it ceased to bleed when its cranial end was squeezed, but continued to bleed although its cardiac end was compressed, proving that the blood flows in the vein *towards* the chest, and not *from* it, as Galen supposed. He experimented on the flow in the veins of the human forearm. He tied a fillet round the upper arm, and showed that the veins on the cardiac side of it become empty, while those on the distal side become engorged: proving that the blood was prevented by the fillet from flowing through the veins *towards* the heart. He observed in the bandaged arm the bead-like swellings of the distended veins that mark the situations of the valves. He applied two fingers to a vein: with one he pressed the vein to prevent the entrance of more blood from below, while with the other he squeezed the blood out of the vein upwards past a valve, and observed that the blood could not return to the emptied segment because of the valve. In that way he demonstrated the function of the venous valves.

If Harvey had only had a microscope able to reveal the capillaries in the web of a frog, in the wing of a bat, or in the tail of a fish, he could readily have demonstrated the actual fact that the blood does flow from the arteries to the veins. But it was reserved for Malpighi to furnish that final link in the chain of actual demonstration. Harvey had to fight his battle in ignorance of the capillaries. He could only say, "The blood must pass from the arteries to the veins and return to the heart, but I cannot exactly say through what channels the passage is effected; the blood appears to pass through the pores of the tissues."

There was much commotion when Harvey proclaimed his doctrine. Many blamed him for his temerity in daring to call in question the doctrines of the ancients; many denied the truth of what he said. But he was indefatigable in demonstrating his experiments, and in devising new ones to carry his case, and he lived to see his doctrine at length accepted by nearly all. But observe how history repeats itself. Harvey in one of his letters (*lib. cit.*, p. 109) says:—"There are some who say that I have shown a vainglorious love of vivisection, and who scoff at the introduction of frogs and serpents, flies, and other lower animals upon the scene, as a piece of puerile levity, and they do not hesitate to use opprobrious epithets. But to return evil-speaking with evil-speaking I hold to be unworthy in a philosopher and searcher of the truth. I believe I shall do better and more advisedly if I meet so many indications of ill-breeding with the light of faithful and conclusive observation. Detractors, mummers, and writers filled with abuse, I resolved never to read them, satisfied that nothing solid or excellent, nothing but disagreeable terms, was to be expected from them, so have I held them still less worthy of an answer. Let them consume on their own ill-nature; let them go on railing until they are weary, if not ashamed." *These are the words of Harvey.* His detractors did at length grow weary. Even in these days of detraction he—the greatest vivisector this country has ever known—is treated with respect, and a monument is raised to his memory in his native town. How often it has happened in the history of science that those who cannot comprehend the aims and methods of the searcher after scientific truth have been all too ready to cast a stone. So it was with one so great as Harvey. *His humble followers need not wonder if they fare no better.*

The work of Harvey was worthily followed up by the Reverend Stephen Hales, rector of Faringdon, in Hampshire, and minister of Teddington-on-Thames. To him we owe the first measurement of the pressure of the blood in arteries and veins. This knowledge was entirely arrived at by experiments on living animals. In his valuable "Statical Essays" (London, 1740), ordered to be printed by the Royal Society of London, he gives the details of experiments on animals, in which he introduced a long, upright glass tube into one of the larger vessels, and observed the height of the column of blood which the pressure could support. He made many experiments on different animals; he observed the effects of various conditions on the blood-pressures, and so tapped a spring of knowledge that still flows with new discoveries. In physiology and pathology there is scarcely any subject which requires to be more frequently taken into account than the blood pressure. It is, like the pulse, a household word to the physiologist.

I fancy the Rev. Stephen Hales would have been greatly gratified could he have seen all that was to flow from his experiments, and I rather wonder what he would have said had he lived until now, and been asked to conduct an anti-vivisection prayer meeting.[1] I am sure he would have felt no little sadness at the strange short-sightedness of some of his fellow Christians.

From Harvey and Hales let us pass to Hunter. John Hunter was a Scotchman of whom we have reason to be proud. We have indeed raised no monument to his memory, but he needs none. The great Museum of the Royal College of Surgeons of London, one of the wonders of the scientific world, is his monument. *Si monumentum requiris, circumspice*, may truly be said by those who gaze at his work. I have no time to detail to you why Hunter has been termed the father of modern surgery, but you will find it was because he was a great physiologist. He did many experiments on living animals. The results of one of these led him to revolutionise the treatment of aneurism—that disease of arteries always so dangerous, and nearly always deadly, before he invented the operation which bears his name. The singular history of that operation has been well told by Professor Owen, formerly Curator of the Hunterian Museum, and therefore one who is intimately acquainted with the history of Hunter's work.[2] Hunter was interested in the growth and shedding of the stag's antlers, and being curious to know what would happen to the growing antler if deprived of its supply of blood, he tied the external carotid artery on one side of the neck. On examining the antler a week afterwards, he found, to his surprise, that its root was warm and pulsating, as it had been previous to the operation. His first impression was that he had not tied the artery properly. To satisfy himself on that point, he had the animal killed, the arteries of its head and neck injected, and then minutely dissected; and he found that the carotid had been duly tied,

[1] An "anti-vivisection prayer meeting," duly advertised at intervals during the past two years, has been one of the features of the anti-vivisection movement in Edinburgh.

[2] See Brit. Med. Journ., 1879, vol. i., p. 284.

but that small branches springing from the cardiac side of the ligature had enlarged, and had thus carried by collateral channels blood to the antler. He had not anticipated this result. He now saw that small bloodvessels may become enlarged, to meet altered physiological circumstances. He quickly translated the thought to popliteal aneurism. He determined to tie the artery on the *cardiac* side of the throbbing tumour, and hoped that while the stagnant blood would coagulate within the aneurismal sac and terminate the agony of its throb, and the fatal danger of its bursting, still, haply, the limb beyond the seat of ligature might not die, but might be saved by the gradual establishment of a collateral circulation, as in the case of the antler. It was even so. The scientific instinct of Hunter guided him aright, and ever since his day the Hunterian operation for aneurism is that adopted; and it would be difficult to estimate the number of limbs and lives that have been saved owing to the thoughtful observation of the effect of tying an artery in the neck of a stag.

But how can I possibly recite in an hour *all* the discoveries regarding the circulation made by vivisection? Harvey and all before him thought that the heart is the great source of the *heat* of the blood. The great phenomenon of fever is an increased production of heat. How could we hope to gain a true theory of heat-production in fever if we are still under the delusion that the heart is the great source of heat? Experiments on animals alone showed that the heart is not a more important source of heat than any other muscle, and *that the hottest blood of the body is not in the heart.*

Our knowledge of the causes of the sounds of the heart we owe to experiments on animals aided by the observation of diseased conditions. The late Dr. Hope, when a resident physician in the Royal Infirmary of Edinburgh, performed the celebrated experiment in which he hooked aside the sigmoid valves at the arterial openings of the heart of an animal, and found that the second cardiac sound disappeared. Also, by experiments on animals, it has been shown that the first sound of the heart depends on vibration of the auriculo-ventricular valves, and the contracting muscular fibres of the ventricles. The knowledge thus gained experimentally is daily of service to the physician. When he hears the second sound of the heart changed from a sharp click into a blowing murmur loudest over the third right costal cartilage, he knows at once that the sigmoid valves of the aorta are no longer preventing the return of blood from the aorta into the heart, that the left side of the heart has its labour increased, and that the life of the individual is in great danger if ever he overtasks the heart by severe exertion. Many other facts of value in practical medicine attach themselves to a knowledge of the causes of the cardiac sounds.

Again, where shall we find in physiology and pathology a subject more important than the functions of the nerves of the heart and bloodvessels? How could we know that the heart has within itself the nervous apparatus essential for its movement unless we excised the heart of an animal—a frog, for example,—and found that it still goes on beating, and that when cut into pieces that portion containing the nerve-cells is the only part which continues to beat? How could we have known the great fact that there is a nerve which controls the cardiac movements, and can arrest them, and can in some occasion a fatal swoon, if it had not been discovered by Weber that when the pneumogastric nerve is divided and its cardiac end stimulated the heart's action is always retarded, and it may be for a time arrested? That experiment laid the foundation of our knowledge of *inhibitory nervous action*—a subject of far-reaching significance, and essential for a knowledge of the function of the nervous system. Again, how could we but by experiment on animals have made the important discovery that the nerves which inhibit the heart are affected by various drugs—some, like atropia, paralysing them; others, like pilocarpine, increasing their sensitiveness? Again, all that we know definitely regarding nerves that accelerate the heart's action we owe to experiments on animals performed by Ludwig and others. The key to our knowledge of the great system of nerves that presides over the bloodvessels was discovered by experiment. Bernard divided the sympathetic nerve in the neck of a rabbit, and observed that the bloodvessels on the same side of the head became dilated. The cranial end of the divided nerve was afterwards stimulated, and pallor of the previously congested part was the result. That was the discovery of vaso-motor nerves. All the arteries and veins in the body are governed by such nerves. Were we still ignorant of them we could not understand the pathology of those forms of paralysis termed reflex, and, necessarily, we could not devise any rational method of treatment. And, again, the nerves which cause dilatation of bloodvessels—our knowledge of such nerves we owe entirely to experiments on animals.

Time will not allow me to do more than merely say that to experiments on animals we owe much knowledge regarding the actions of drugs on the heart; regarding the coagulation of the blood; regarding its respiratory changes and the manner in which its composition is affected by the inhalation of various gases; indeed, to show fully all that we have learned concerning the circulation from experiments on animals would require at least ten lectures instead of one. Other departments of physiology also teem with facts arrived at by vivisection. Were all these facts eliminated from physiology and from medicine, the remnant would indeed be a sorry figure, and in this age of brilliant scientific advancement, those who profess medicine would be treated with contempt, because of their almost complete ignorance of the bodily mechanism. I am convinced that if unbiassed minds would only consider what has actually been achieved for medical science by experiments on living animals, they would not fail to see the necessity for allowing without hindrance all duly qualified medical men, willing to undertake the labour, to carry on in the future that kind of research which has yielded so much fruit in the past. And although the great majority of even the educated public cannot, from want of a medical education, fully understand our methods of research and the objects we have in view, yet they ought to credit us with sincerity and with a desire to pursue in a humane manner the search for that knowledge by which the whole civilised world profits daily.

ABSTRACTS
OF THE
Lettsomian Lectures
ON
DISEASES OF THE TESTICLES AND THEIR COVERINGS.

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LECTURE I.—PART I.

THE first lecture was devoted to the consideration of the diseases of the Tunica Vaginalis and Scrotum. Inflammation, generally chronic, of the tunica vaginalis gives rise to the effusion of serum and the formation of the most common or vaginal variety of hydrocele. In some instances the effusion is due to the irritation caused by the presence of loose bodies, which are dense, secondary cysts, and made up of horny epithelium. It may be caused by varicocele, by operation in the neighbourhood, and, as shown by Dr. Bancroft, of Australia, by the presence of filariæ. The inflammation gives rise to thickening of the parts around, and the formation of new membranes within the sac. Inflammation may spread from the tunica vaginalis to the epididymis through the medium of the connective tissue, but the testicle escapes. Calcareous salts may be deposited in the tunica vaginalis, and prevent it from collapsing after operation.

Hydrocele is often consequent on elephantiasis scroti, malignant or syphilitic disease of the testicle. The fluid is generally albuminous, straw-coloured, and free from spermatozoa, but may be brownish or blood-stained, and in old cases loaded with cholesterin crystals. Sir W. Fergusson drew off, three times in one year, from a healthy man, a fluid like melted butter, which was analysed by Dr. Geo. Harley and Mr. Francis Mason, and found to contain albumen, a trace of sugar, and oil-globules, which gave it the white colour. It illustrated the disease called by Vidal de Cassis "galactocele." The position of the testicle, generally at the back part of the swelling, is determined by making firm pressure, when testicular tenderness is complained of by the patient. The hydrocele may contain a few ounces or many quarts of fluid. The testicle at times is adherent to the tunica vaginalis, or inverted, and with its cord runs along the front of the swell-

ing, and might be wounded by the trocar. The swelling is painless, pyriform, with its apex at the external ring; it first forms below, is transparent, and fluctuates, and is lighter than a solid tumour. The cord is quite free and normal unless the hydrocele invade the inguinal region, and there is no impulse in coughing. The best way to demonstrate its transparency to a class is to take the patient into a darkened ophthalmic room and illuminate it with a powerful ophthalmic lamp. The testicle will sometimes cast a dark shadow. The transparency is absent when blood has been effused into the fluid, or it is dark coloured and loaded with cholesterin crystals, or a very thick sac is present. A patient, aged sixteen, with double hydrocele, presented an irregular hour-glass constriction of both hydroceles. That on the right side being much larger than on the left. In infants hydroceles are common, and get well spontaneously or after the application of muriate of ammonia and spirit lotion, weak tincture of iodine or collodion. In obstinate cases a few silk threads passed through the hydrocele for a few hours will cure. Tapping is of use to reduce the size of large hydroceles prior to their injection with iodine solution, and for the purposes of diagnosis, and is sufficient when the patient is old. Sir A. Cooper says of the methods of cure by incision and the introduction of lint or flour, or by excision of the sac, they are too cruel and dangerous for so trifling an inconvenience. Caustics are uncertain, and that they are dangerous a specimen in the Hunterian Museum bears witness. The treatment by tents was severe, and caused much constitutional disturbance. Munro, Sharp, and others employed injections, but they used them too strong. Sir James Earle did good service by recalling the attention of the profession to the cure of hydrocele by injection in 1791. Port wine and water were generally used, also spirit, but the solutions varied so much in strength that a solution of sulphate of zinc, one drachm to a pint of water, was substituted, and with this the tunica vaginalis was distended several times, and the fluid allowed to escape. Modern surgeons are much indebted to Sir Ranald Martin for introducing to their notice tincture of iodine, one part to three of water, as an injection. Mr. Curling recommends the following solution: iodine two scruples, iodide of potassium half a drachm, rectified spirits of wine one ounce; inject one or two drachms, which are to be left in the sac; to be diluted one-half for young persons. Sir William Fergusson used equal parts of simple tincture of iodine and water, which he allowed to remain, and found a drachm or two of the solution sufficient for the cure of the largest hydrocele. Mr. Syme used to inject and allow to remain a drachm or two of the Edinburgh tincture of iodine. The cannula is to be introduced and pushed up to its shoulder, and the solution thrown in, taking care, by pinching the tissues against the cannula, to keep it in place and prevent extravasation into the cellular tissue. I have strapped some cases after tapping without preventing the reaccumulation of the fluid. If syphilitic orchitis be present, specific medicines will remove both the orchitis and the hydrocele. It has been proposed to tap with a large trocar and cannula, and through the latter introduce strong carbolic acid or iodoform. Setons, instead of being used as the ordinary method of curing hydrocele, as recommended by Mr. Pott, are reserved for cases in which injections have failed. A double thread is carried across the sac and withdrawn after a few days, when it has set up sufficient inflammation. I have tried silver wire as a drain, but found that it caused a good deal of inflammation, and that its tract was slow to heal. Under these circumstances a good plan is to fix the tunica vaginalis and skin by passing a couple of threads transversely through both skin and tunica vaginalis two inches from one another, divide the parts between the two threads, wash the tunica vaginalis out with carbolic acid solution (one in twenty), and stitch its cut margins to the skin with carbolised catgut. Dress with antiseptic precautions, and use iodoform wool.

By inguinal hydrocele is meant a collection of fluid in the tunica vaginalis which encloses a testicle retained in the inguinal canal. The swelling fluctuates and is transparent, and may communicate with the peritoneal cavity; the testis is absent from the scrotum. The best plan is to remove the undeveloped testicle and its sac, and stitch up the communication with the abdomen with carbolised catgut sutures, using antiseptic precautions.

In congenital hydrocele the funicular process of the tunica vaginalis remains open, when, in addition to the ordinary symptoms of a hydrocele swelling, there is impulse on coughing; it is smaller after a night's rest, and the fluid can be slowly pressed back into the abdomen, but reappears when the patient stands up. The testicle is to be readily felt, and the patent canal obliterated by the pressure of a truss or by subcutaneous ligature with catgut. A solution of iodine injected and allowed to return, pressure being made in the ring, will also cure. Small cysts in the cellular tissue about the head of the epididymis, sometimes pedunculated, do not contain spermatozoa. The large cysts are intimately related to the efferent ducts, and displace the testicle downwards or to one side; they contain a milky fluid, slightly albuminous, and contain at times spermatozoa. These cysts are independent formations in the connective tissue, and, owing to rupture of one of the tubes of the epididymis, the spermatozoa escape into the hydrocele cyst.

Encysted hydrocele of the testis is situated between the tunica vaginalis and tunica albuginea, and is rarely met with. As a rule, encysted hydrocele of the epididymis is of moderate size, is irregular in shape, with its longest diameter tranversely, and is attached to the upper part of the testicle, with which it moves; it is at times multilocular, and may contain spermatozoa. Iodine injection may fail to cure these cases, and a seton be necessary, or an antiseptic incision. In diffused hydrocele of the cord its sheath is thickened, and its cellular tissue distended with serum. Fluctuation is evident, and the testicle is felt below. The finger cannot be introduced into the inguinal canal, nor the swelling returned into the abdomen, but there is a slight impulse. Acupuncture will let off the fluid and disperse the swelling. In encysted hydrocele of the cord there is a hard swelling in the cord, which may be free above and below the swelling, but if in the upper part of the cord it can be pushed up into the abdomen, where it can be felt tucked behind the wall, from which it will shoot as soon as the finger is removed and the patient coughs. These cysts may form in the cellular tissue, but are generally developed in the unobliterated funicular process; their fluid contains no spermatozoa. A sac of a hernia which has become cured may present all the symptoms of a cyst in the cord; a large collection of fluid may run up the cord and form a fluctuating tumour in the abdomen, communicating with that in the cord, the testicle remaining distinct.

Congenital hydrocele of the cord, due to a patent condition of the canal of Nuck, presents on a small scale the same symptoms as encysted hydrocele of the tunica vaginalis. The pressure of a truss will effect a cure.

OBSERVATIONS IN URINARY PATHOLOGY AND THERAPEUTICS.

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IV. CLINICAL AND PATHOLOGICAL SIGNIFICANCE OF DEPOSITS OF CALCIUM OXALATE IN URINE.

THERE are few subjects in urinary pathology which have excited keener controversy than that which concerns the causes tending to produce a deposit of oxalate of lime crystals in urine. Originally discovered by Wollaston in 1803 as the constituent of the mulberry variety of calculus, its presence as a crystalline deposit in the urine was for a long time overlooked. In 1842 Dr. Golding Bird, in the *Medical Gazette*, drew attention to the fact that oxalate of lime was frequently present as a crystalline deposit in urine, and detailed a series of nervous and dyspeptic symptoms which he alleged were associated with the appearance of this salt in the urine, and which he supposed to be intimately connected with an increased production of oxalic acid in the system. Dr. Golding Bird's observations were at first accepted with some degree of hesitation, but subsequently they received the support of Beneke[1] and Begbie.[2] As more extended observations were made it was found that crystals of oxalate of lime were of very frequent occurrence, that they were found in urine under a variety of pathological conditions, that they were so far from being invariably associated with a train of nervous and dyspeptic symptoms that they were frequently met with in the urine of persons apparently enjoying robust health. Hereupon a reaction

[1] Zur Phys. und Path. des Phosphors und Oxalsaure Kalkes. 1850. Zur Entwicklungsgeschichte der Oxalurie. 1852.
[2] Edinburgh Monthly Journal of Medicine, March, 1848.

ensued, and the opinion gained ground that these deposits had no clinical significance whatever, and it was even called in question whether the oxalic acid found in the urine ever existed in or was excreted as such from the blood, and it was suggested that oxalic acid was merely a product produced by changes occurring in the urine after emission. In England these views have been advocated by Basham,[3] Bence Jones,[4] and Owen Rees.[5] The latter gentleman goes so far as to regard "oxalate of lime merely as uric acid, or urate altered after secretion," and states that he has entirely failed to detect the peculiar pathological conditions which have been said to connect themselves with the so-called oxalic acid diathesis, and is convinced that it must be regarded as an accidental and unimportant modification of that most significant variation from health which consists in the excretion of uric acid, or its compounds, in abnormally increased proportion. This relegation of crystalline deposits of calcium oxalate to a position of almost absolute insignificance, except with regard to the question of the formation of calculi, has received very general acceptance with the profession. Facts, however, are now known which point to the conclusion that oxalic acid is formed in the organism and excreted with the urine, and that uric acid, though a frequent factor, is not the only source from which it is derived, either by oxidation within the system or by decomposition after it has been excreted.

Whoever has been in the habit of making frequent observations as to the character of urinary deposits will have noticed that crystals of oxalate of lime occur most frequently in two distinct classes of urines. The one of deep yellow or orange colour, of high specific gravity, usually containing an excess of urea and phosphoric acid, and turbid with mucus and urates; the other pale, of a citron-yellow, or greenish hue, of medium specific gravity, and perfectly clear except at the bottom of the urine glass, where a slight cloud of mucus is collected, and in which deposited oxalates will be found. In the first instance, which is one most frequently met with, the oxalate of lime may probably be occasionally formed in the urine subsequent to emission from chemical changes taking place in that fluid, especially if it has been kept some time, such as decomposition of uric acid and urates, or by the oxidation of the pigmentary matters and mucus (acid fermentation). In the latter case, which is less frequently observed, there is very little reason to doubt that the oxalic acid comes from the blood, as I hope presently to show. Again, urines such as are described under the first category are met with under a variety of pathological conditions—frequently during the course of most febrile diseases, in pulmonary and cardiac affections, in which respiration is impeded, and in disorders of the hepatic functions. In these cases, however, the presence of oxalate of lime crystals is by no means constant; sometimes appearing and disappearing without any apparent reason or alteration in the general condition of the patient; and, lastly, if these urines be filtered shortly after emission, whilst still warm, a considerable crop of oxalate of lime crystals will subsequently form. On the other hand, in the second variety, filtration after emission greatly checks the tendency to subsequent formation of oxalate of lime crystals, though there is an abundant deposit from a sample of the same unfiltered. Unlike the other form, the urinary phenomena are usually very persistent, and the same character of urine is met with day after day, whilst with it is associated a form of dyspepsia inducing considerable emaciation and attended with intense nervous depression and hypochondriasis. Had these clinical distinctions been insisted on at first, a discrepancy of opinion would, perhaps, never have arisen. Unfortunately Dr. Golding Bird and his supporters, finding oxalate of lime associated in some of his cases with a train of distinct and peculiar symptoms, regarded the appearance of these crystals in the urine in every instance as having a far more extensive pathological significance than they really had. On the other hand, Dr. Owen Rees and those who advocated his views, remarking the numberless instances in which oxalate of lime deposits are met with in the urine without being able to connect them with any special pathological conditions, overlooked or disregarded the cases in which these exceptional conditions had been noted by other observers, and thus came to regard these deposits as accidental and unimportant, and indicating nothing more than uric acid, or urates altered after excretion.

[3] Renal Diseases, p. 187, 1870.
[4] Lectures on the Application of Chemistry to Pathology and Therapeutics, p. 98, 1867. [5] Croonian Lectures, pp. 22, 90, 1856.

The view that oxalate of lime in urine was derived from the decomposition of uric acid was based on the hypothesis that uric acid contains the elements of oxalic acid, carbonate of ammonia, hydrocyanic acid, and formic acid, and that the decomposition could be effected by simply heating the urine. The decomposition of uric acid, however, is not such a simple matter as is here represented. Indeed, the stability of uric acid under treatment has suggested a doubt to chemists whether it contains *preformed* residues of urea, since in all undoubtedly so constituted bodies the residues of urea are removable or decomposable with the greatest facility. Nevertheless, a molecule of urea under the action of powerful oxidising agents does yield two molecules of urea and one molecule of a carbon-acid of *some kind or other*, according to the nature of the agent employed. Thus with acids uric acid first breaks up into alloxan and one molecule of urea, and alloxan by hydration yields mesoxalic acid and another molecule of urea, and the mesoxalic acid by oxidation yields carbonic acid and oxalic acid. By oxidation with alkalies uric acid is first converted into allantoin and carbonic acid; then the allantoin by hydration becomes urea and allanturic acid, and allanturic acid by oxidation yields urea and glyoxylic acid.[6] Now, within the body, under the influence of increased oxidation, it is possible that these decompositions may occur. But, as a considerable quantity of oxygen is required to effect the reductions, and as the clinical and pathological conditions in which we meet with oxalate of lime in the urine do not point to increased oxidation going on within the body, but the reverse,[7] the occasions in which it can be derived from this source must be rare and exceptional. Uric acid, too, after it is voided in the urine may possibly undergo decomposition, but it can hardly be supposed that such a stable body undergoes spontaneous change without some powerful oxidising agencies being at work to produce the result, yet in typical cases of oxaluria we frequently discover crystals of oxalate of lime as soon as they have had time to settle and collect, and yet have no evidence that any change has taken place in the urine since its emission. Again, if uric acid by its decomposition yields oxalic acid so readily, we should expect to find it rapidly disappearing as the process went on; but we have no evidence that this is the case, or at all events till some considerable time has elapsed. Again, with reference to Dr. Owen Rees's assertion that if urine loaded with urates be heated, and then allowed to cool, oxalate of lime will, after the space of a few hours, be found in abundance, though none may have been detected before. This observation, however, has been questioned by Parkes,[8] Racle, and Neubauer,[9] but still, admitting it to be correct, it is sufficient to remark that the application of heat materially assists oxidation, and as oxalate of lime frequently occurs in freshly passed urine, when there is no deposit of urates and heat is not applied, and there is no evidence of any change having taken place in the urine itself to account for the formation of the crystals, it has but little bearing on the question.

From a consideration of the foregoing, I think the conclusion may fairly be arrived at that the conditions under which oxalic acid is formed from uric acid in the system are extremely limited and exceptional. If uric acid is formed directly from uric acid within the system, it must be under conditions which promote increased oxidation within the body—such, for instance, as pure air, exercise, sea-bathing, &c.—conditions which, it need hardly be said, are generally resorted to for its removal. In the second place, without denying the possibility of oxalic acid being ultimately formed in urines from the decomposition of uric acid, I think we may affirm that no deposit of oxalate of lime occurring in urine within twelve hours after emission is due to that cause.

(To be concluded.)

[6] For more complete details refer to Professor Foster's Text-Book of Physiology, p. 615, or Professor Odling's Lectures on Animal Chemistry, pp. 129–140.

[7] There is great confusion on this point. Thus Murchison, in his Croonian Lectures on Functional Derangement of the Liver, after remarking that "Schmidt and other chemists state that within the body oxalic acid is formed by the *oxidation* of lithic acid," in the next sentence observes, "When lithic acid is *imperfectly oxidised* it is believed to break up into urea and oxalic acid." Dr. Bence Jones (Lectures on Pathology and Therapeutics, p. 95) also makes the statement, "When uric acid is *imperfectly oxidised* it divides into oxalic acid and urea." From the decompositions of uric acid which I have given above, it will be seen that *imperfectly oxidised* products are alloxan, urea, and mesoxalic acid, whilst oxalic acid is only obtained by oxidation being carried to its ultimate stage. [8] Op. cit., p. 234.

[9] Liebig's Annalen, Band cvi., p. 59. Archives des Versins, Band iv., p. 7.

ON TWO CASES OF

ACUTE MYELITIS ASSOCIATED WITH OPTIC NEURITIS.

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(Concluded from p. 8.)

CASE 2. *Optic neuritis, going on to complete atrophy and total blindness; gradually increasing paraplegia, with anæsthesia; retention of urine; mental symptoms; death. Acute disseminated myelitis of lumbar and dorsal regions of the cord; brain healthy.*—Robert S——, aged forty-one, a tailor, was admitted into the Manchester Royal Infirmary on October 22nd, and died on November 2nd, 1880. The following is a brief outline of the case from the notes taken by the clinical clerk, Mr. Joseph Clegg:—

Family history.—Patient's mother is still alive. His father died a few years ago from heart disease. Has only had one brother, who is alive and healthy. Is not aware of any of his relatives dying from consumption, cancer, or nervous disease.

Previous history.—Had syphilis many years ago, which, according to his account, was speedily cured, and has not troubled him for years; has followed the occupation of a tailor for years, and not been exposed to the weather, but has worked in a small and badly ventilated room. Three years ago he married, his wife's age at the time being fifty; has had no children; has not been very temperate, and has drunk rather heavily during the last twelve months. A month before admission patient noticed his sight getting bad; he observed also his legs getting weaker, especially the left; the dimness of sight increased to such an extent that he was obliged to give up his work. On October 5th he went to the Manchester Eye Hospital; his eyesight was then very bad; he could walk, but had to use a stick, owing to weakness in the legs. On October 13th he went again to the Eye Hospital, being then quite blind, but still able to walk. He was admitted into the Eye Hospital on October 16th, and transferred to the Manchester Infirmary on October 22nd. (Dr. Mules, of the Eye Hospital, informed me that the patient was at first suffering from optic neuritis, which very soon went on to complete atrophy of the disc; that on the first visit of the patient there was but little paralysis, and that this came on only after some time, and very soon increased to such an extent as to render the patient quite paraplegic.)

Condition on admission into the infirmary.—Patient lies in bed on his back, with head thrown backwards; looks old for his age, is fairly nourished; has a worn expression and pale face. Patient answers questions rationally, and is quite conscious, but often mutters to himself; he is delirious at night. Does not complain of either headache or vertigo. Patient is quite blind, and the ophthalmoscope shows marked atrophy of both discs (the outline of the disc is irregular and hazy, the disc white, the bloodvessels small). The other special senses fairly normal. There is no affection of any other of the cerebral nerves; the pupils are dilated and react but little. The lower extremities are completely paraplegic, there is analgesia of the lower extremities and loss of the sensibility for temperature, but no loss of tactile sensibility. There is anæsthesia and analgesia of the trunk as high as the fourth rib; between the third and fourth ribs there is a zone of hyperæsthesia and hyperalgesia; above this the sensibility of the rest of the trunk, neck, and head is normal. There is no atrophy of the lower extremities. The superficial reflexes (cremaster, abdominal, &c.) are normal; the patellar reflex is rather increased in both legs. The upper extremities are perfectly normal as regards mobility, sensibility, and nutrition. The patient has lost all control over the sphincter of rectum and passes the fæces under him; he has retention of urine, and the urine has to be drawn off every morning; it has a sp. gr. of 1020, is alkaline, and contains a small quantity of albumen; it has a ropy deposit, which microscopically examined shows mucous corpuscles and triple phosphates, but no casts. The physical examination of the heart, lungs, liver, and spleen shows nothing abnormal. There are a slight cough and expectoration of frothy mucus. The pulse is 80, small, compressible. The tongue is clean; the appetite bad; no vomiting. Temperature 98·4°.

Diagnosis.—Considering the presence of atrophy of the optic disc, which had been preceded by optic neuritis and the peculiar mental condition, it was thought that the patient suffered from a double lesion, cerebral and spinal. It was impossible to localise the cerebral lesion; the spinal lesion could, however, be easily localised as to its upper limit, as situated in the upper and middle dorsal region. As for the nature of the lesion, it was thought to be most likely of syphilitic origin, and here again, considering the presence of the optic neuritis, the analgesia and the integrity of the tendon reflexes, the lesion was believed to be more of the nature of a gummous tumour than a diffuse syphilitic inflammation.

Treatment.—The syphilitic history of the patient suggested an energetic anti-syphilitic treatment, and the patient was at once subjected to mercurial inunction (one drachm of mercurial ointment daily), and he was ordered thirty grains of iodide of potassium three times daily.

Progress.—The patient's condition, excepting a slight rise of temperature, remained unaltered for the next few days. On October 27th it was noticed that the lower extremities besides being analgesic were also anæsthetic; the upper limit of the anæsthesia on the trunk extended somewhat higher than when first noticed. The patellar tendon-reflex, however, was still found intact, perhaps even slightly increased. The further notes of the case are briefly these:—October 28th: The patient has been delirious and restless all night and is now found somewhat drowsy. Pulse 100; temperature 99·4° (at 9 A.M.)—29th: Since about 11 o'clock last night patient has been constantly moaning and is delirious. At present (10 A.M.) he lies in a semi-comatose condition, with his eyes closed and mouth partly open; lips and face rather livid; from this condition he can be roused and answers questions in a rational manner. Complains chiefly of difficulty of breathing. The respiration is now purely abdominal, besides the diaphragm the sterno-mastoids act; it is irregular, quick, and laboured, 27 per minute; there is occasionally slight cough. The paralysis, besides affecting the lower extremities, has now also affected the intercostal muscles. The anæsthesia is limited above by the second rib on the left, and the third rib on the right side. The patellar tendon-reflex is now for the first time noticed to be completely absent on both sides. The superficial reflexes are present, but are found diminished. The patient takes now no food whatever, but can swallow. Rectum and bladder in the same state as on admission. The pulse is weak, quick, soft, and compressible, and very irregular, varying from 120 to 140 per minute. At 10 A.M. respiration 27, pulse 130, temperature 96·4°. 8 P.M. respiration 29, pulse 140, temperature 100·8°.—Oct. 30th: Patient has remained in much the same condition since yesterday. Tongue dry and furred. At 10 A.M. respiration 32, pulse 132, temperature 97·4°. 8 P.M. respiration 32, pulse 136, temperature 98·4°.—Nov. 1st: Patient still comatose; can be roused and answers questions rationally. Tongue has a thick dry brown fur. Urine has still to be drawn off; its sp. gr. is 1018, alkaline, and it contains albumen, blood, mucus, and triple phosphates. Breathing purely abdominal. Line of anæsthesia the same as on Oct. 29th. Slight quivering of the muscles of the face and neck. A bedsore has formed on the sacrum. At 10 A.M. respiration 34, pulse 120, temperature 99·4°. At 8 P.M. respiration 34, pulse 130, temperature 98°.—Nov. 2nd: Patient is sinking, lies in bed with his head thrown back; moves his head from side to side; the quivering of the muscles still persists. Can only be roused with the greatest difficulty. A small quantity of urine drawn off with catheter. No radial pulse can be felt, the temperature has fallen to 96·4°, respiration stertorous, 36 per minute. The patient died during the day (3 P.M.); the temperature soon after death was 96°.

Necropsy twenty hours after death, by MR. A. H. YOUNG, pathological registrar to the Manchester Infirmary.—Nothing noteworthy was found in the chest and abdominal cavity. On removing the skull the membranes of the brain appeared perfectly healthy and normal. There was no opacity or increased vascularity. The brain was removed, and carefully examined, but showed no lesion whatever; the ventricles were not distended, the vessels normal, and the cut surface of the brain in all its parts appeared in no way altered. The membranes of the spinal cord were found healthy; the spinal cord itself, however, showed marked changes visible to the naked eye. Sections of the cord in

the fresh state showed extensive central myelitis in two distinct regions, the middle dorsal and the upper lumbar regions; in these regions the peripheric portion of the cord formed a sort of envelope to the central part, which was converted into a soft, red, pulpy mass, and could be drawn out from the peripheric part in the form of a cylinder; the softened part in each region had an extent of about one inch and a half; the portion between them appeared slightly softened. In the upper dorsal region a softened patch was found, occupying chiefly the right half. The cervical and the rest of the lumbar region of the cord showed no changes in the fresh state. Portions of different parts of the brain, the medulla, the optic nerves, and the spinal cord were hardened in bichromate of ammonia, and carefully examined by me microscopically. No lesion of any kind could be detected in the several parts of the brain, including the chiasma and central parts of the optic nerves. The peripheric termination of the optic nerve showed a mass of fully formed fibrous tissue, and numerous embryonic cells between the nerve fibres, which were, however, not otherwise altered; no hæmorrhages or engorgement of the bloodvessels were visible. These changes did not extend in the retina beyond the papilla. The medulla showed no alterations. The spinal cord, however, showed many more changes than could be seen in the fresh state. Beyond the marked central myelitis described above, and which was seen to implicate the central canal and portions of the anterior horns and the adjacent parts, numerous patches of acute myelitis were seen in different regions; they could be easily recognised in the thin and stained sections, where they gave rise to a peculiar transparent appearance, and took the staining easily; unstained they had a homogeneous and gelatinous look to the naked eye. One of these spots occupied the lower cervical and upper dorsal region, and affected the right side, implicating the lateral column, the posterior horn, portions of the anterior horn and posterior column. Another patch was situated below this, and affected almost exclusively the posterior part of each anterior horn, and a third patch was found in the lower lumbar region affecting the posterior columns throughout their extent. Microscopically, these patches were characterised by an extensive engorgement of the bloodvessels, free hæmorrhages, and the presence of numerous leucocytes, masses of granular matter, and granule cells. The ganglia cells in the affected parts of the anterior horns were swollen, and their nuclei could not be seen; of the nerve fibres but little was visible in the affected parts of the white columns. The cervical region showed commencing ascending (secondary) degeneration.

From the description of the post-mortem lesions it is thus evident that we had here a case of acute disseminated myelitis. The disease was evidently progressive, the central myelitis was of older date than the myelitis in the upper dorsal and lower lumbar region; to the former must be described the paralysis of the respiratory muscles, and to the latter the disappearance of the patellar reflex, both of which symptoms only supervened, as will be seen from the history of the case, during the last few days of life. To account for the presence of the mental symptoms in this case we found no anatomical substratum.

It is evident that the most interesting point in connexion with this case is the presence of the neuritis. It is clear that the prevailing theories do not account for it, and unless we assume that the optic neuritis and the myelitis were both the result of a common cause (a view which has been suggested by Dr. Gowers), it will be very difficult to explain the optic neuritis in this case. Most probably the same explanation holds good for the first case; it will be noticed, however, that in that case there were marked congestion of the brain and distension of the ventricles, and the sheath of the optic nerve was distended with serum.

AT Hull Police-court, last week, a captain was fined 20*s.* and costs for refusing to supply one of the seamen on board his vessel with lime-juice when requested to do so. The vessel was in a port of Savannah, and the crew were put upon a diet of salt provisions. The captain's defence was that he was not bound to supply lime-juice unless the ship had been ten days out at sea, but the magistrate disallowed the plea.

DR. W. B. HUNTER, of Littleport, Cambs, has received a Government grant of £9 12*s.* for efficient vaccination in his district.

CASE OF

COMPLETE POSTERIOR DISLOCATION OF LEFT KNEE-JOINT, WITH LIFE-LONG USE.

BY JOHN BAGNALL-OAKELEY, M.R.C.S.

MR. P——, aged seventy, now very shaky and infirm, and for the last two years confined to the house, when nine months old fell from his aunt's arms, and damaged his left knee-joint. He has from about that age been the subject of complete posterior dislocation of the left knee-joint, and attributes the dislocation to the fall he then experienced. Individually I am a little doubtful whether the dislocation was the immediate result of the accident, or secondary to inflammation set up by the accident. He has from his earliest infancy been always able to use his left leg and knee, which latter appears at no time to have given him any trouble. He has earned his living as a brickmaker, and from his account has never been laid up a single day from the knee alone. A false joint has formed between the lower end of the left femur and upper and anterior surface of left tibia,

which allows a limited amount of flexion—some fifteen degrees only. The left foot is typically normal as to shape, size, height of arch, and the left calf is equally developed to the right. There is no permanent flexion of leg or thigh. The left femur is abnormally curved with the convexity anteriorly. The patella is undefinable, but apparently fused by anchylosis into the lower end of the femur. The various prominent tuberosities at the lower end of the femur are quite subcutaneous, and appear ready to start through the skin on the slightest provocation, but there is no trace of old ulceration. As his right hip-joint is affected by rheumatic arthritis, one naturally asks particularly about the previous history of the left knee. As it so clearly dates back to early infancy, and has always been free from all pain, rheumatic or otherwise, I think one must preclude the idea thus naturally suggested. Considering at what a disadvantage this false joint at the left knee acts, and its constant use, it is wonderful that it should have been so free from pain and have been so efficient.

Swinefleet Village, near Goole, Yorks.

SALICYLATE OF SODA IN ACUTE AND SUBACUTE RHEUMATISM.

BY SIDNEY COUPLAND, M.D., F.R.C.P.,
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(*Concluded from p. 12.*)

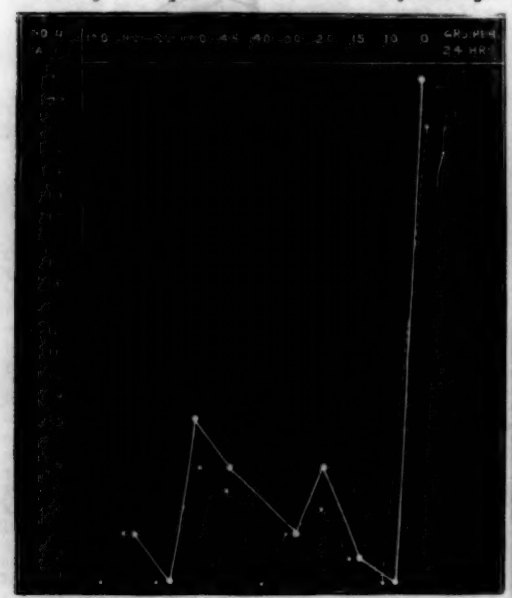
3. *Relapses.*—In the Chart[1] and in Table A all information is given about this important feature of rheumatism, and the statistics I shall give have been compiled from a careful study of these tables. (Cases 25 and 84 are again excluded.) As pyrexial and articular manifestations are no more entirely coincident in the relapse than in the primary attack, I have separated them as in dealing with the latter.

a. Relapse of pyrexia.—Out of 82 cases there occurred a more or less marked relapse of pyrexia in 29 or 35·3 per cent.; in 8 not accompanied by relapse of joint pain. In these 8 cases the relapse of temperature was mainly due to the supervention of tonsillitis, or pericarditis, or to change of diet.

Of these 29 cases 18 occurred with one relapse, 5 with two,

CHART 2.

Showing the relapses in relation to the dose of the drug.



Pyrexia is denoted by the dotted line, joint pain by the continuous line.

4 with three, and 2 with four—making a total of 48 relapses for us to study. These relapses varied from one to thirty days in duration, the average duration being 7·2 days. The relapse commenced on the 5th day in two, on the 7th in one, on the 8th in one, on the 9th in two, and on days beyond that up to the 68th in one case, when four relapses occurred. The average day of commencement was the twenty-third after admission, and of cessation the thirty-first.

In relation to the dose of salicylate, I find that one occurred whilst 120 grains were being given, 3 under 90 grains, 1 under 80, 6 under 60, 5 under 45, 1 under 40, 3 under 30, 4 under 20, 2 under 15, 1 under 10, and no fewer than 21 out of the 48, when the drug had been left off. (See Chart 2.)

A further analysis of these 21 cases shows much diversity as to the time after the drug was discontinued at which the pyrexial relapse took place—viz.:

On the day salicylate of soda was left off—in	1	case.			
„ 1st day after	„	„	„	„	1 „
„ 2nd „	„	„	„	„	2 cases
„ 3rd „	„	„	„	„	6 „
„ 4th „	„	„	„	„	2 „
„ 5th „	„	„	„	„	1 case
„ 6th „	„	„	„	„	1 „
„ 7th „	„	„	„	„	3 cases
„ 8th „	„	„	„	„	2 „
„ 14th „	„	„	„	„	1 case

(A previous relapse occurring from 3rd to 6th day.)

„ 16th „ „ „ „ „ 1 „

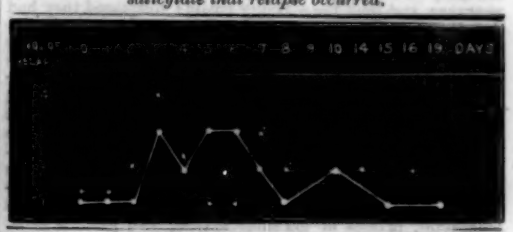
(A previous relapse occurring from 3rd to 7th day.)

(See Chart No. 3.)

b. Relapse of joint pain.—This being dealt with in the same way gives 29 cases out of the 82 (or 35·3 per cent.), 9 of which were unaccompanied by rise in temperature. Fifteen of these cases were marked by 1 relapse, seven by 2, six by 3, and one by 6, giving a total of 53 relapses to be analysed. These occurred at varying periods from the eighth to the seventy-third day after admission, the last being one of a series of 6 relapses in the course of the same case. The average date of commencement of the relapse was the

CHART 3.

Showing the number of days after the discontinuance of salicylate that relapse occurred.



Relapse of joint pain, 23; of pyrexia, 21.

NOTE TO CHART 3.—This chart requires the following corrections to be made in it:—For 4 read 6; and under the 9th day, insert 2 cases of relapse of joint-pain (continuous line).

twenty-sixth day, of its cessation the 29·2nd day, the average duration being about three days and a half.

In relation to the administration of salicylate of soda there occurred under doses of—

90 grains	3 relapses.		30 grains	3 relapses
80 „	1 „		20 „	6 „
60 „	8 „		15 „	2 „
45 „	6 „		10 „	1 „

And when none of the drug was being taken 23 cases of relapse took place. (See Chart No. 2.)

These 23 cases of relapse of joint pain took place—

On the day the salicylate of soda was left off in	1	case.		
„ 1st day after	„	„	1	„
„ 2nd „	„	„	1	„
„ 3rd „	„	„	3	cases.
„ 4th „	„	„	2	„
„ 5th „	„	„	3	„
„ 6th „	„	„	3	„
„ 7th „	„	„	2	„
„ 8th „	„	„	1	case.
„ 9th „	„	„	2	cases.
„ 10th „	„	„	2	„
„ 15th „	„	„	1	case.
„ 19th „	„	„	1	„

(See Chart No. 3.)

The deduction from these statistics, then, would be that the withholding of the drug renders the patient more liable to pyrexial and articular relapses than if its administration be continued; but that the relapse may occur in spite of fairly considerable doses being given, as many occurring under doses of sixty grains and upwards for twenty-four hours, as under smaller doses.

[1] Unpublished.

I have also compared the liability to relapse according to the severity of the primary fever, with this result:—

	Pyrexial relapse.	Articular relapse.	Total cases.
Class I.	2 ...	2 ...	4
,, II.	2 ...	1 ...	8
,, III.	5 ...	6 ...	15
,, IV.	9 ...	10 ...	23
,, V.	8 ...	8 ...	21
,, VI.	3 ...	2 ...	11

The proportion of relapsing cases is about one-half of the total in each class, except the mildest, and those between 103 and 104, in each of which classes it is about one-fourth. The percentage of relapses in these cases is certainly high—viz., about 34 per cent. of the total; and Dr. Fagge's 93 out of 355 give about 26 per cent. Comparing, as he did, these cases which were relieved in five days, I find as regards *pyrexia* that 21 out of 61 relapsed, as regards *joint pain* 11 out of 39. It is important to mention these differences in our results as possibly they may be accounted for by differences in the mode of administration of the drug.

Lastly, before leaving this question of relapses, I should like to recall the fact that they may be promoted by a too early transition from a milk to a solid diet, or by too early getting up from bed. The readiness with which the salicylates subdue the fever and pain is liable to lead to too hasty changes in these respects, and therefore indirectly to relapse. I have no figures to bear this out, but I am certain that I have seen relapses occur under the use of the salicylate which one might fairly attribute to change of diet or abeyance of rest.

4. *Duration of stay in hospital.*—Not having sufficient data to give statistics concerning the length of confinement to bed, I have no means of indicating the period of convalescence except by taking the total duration in the hospital. As a rule, I suppose the patients are up and on full diet for quite a week before their discharge, except in mild cases. Again, excluding No. 25 as being a most exceptional case, I find that the average stay in hospital was 36 days, or, according to the primary severity:—

Class I.	Average stay of 49·7 days.
,, II.	,, 32·0 ,,
,, III.	,, 43·0 ,,
,, IV.	,, 33·6 ,,
,, V.	,, 32·6 ,,
,, VI.	,, 25·0 ,,

Some of the cases were very long retained—e.g., one discharged on the 95th, one on the 85th, one on the 82nd, one on the 77th, one on the 33rd, and eleven remained in from the 50th to the 65th day. It would be interesting to calculate the duration with the amount of salicylate given, to test the opinion that patients become more debilitated and anæmic under its use. Certainly these cases are of long average duration, for I find that of 317 treated in 1872–73, when I was medical registrar, the average length of stay was 31·4 days.

5. *Total duration from onset of symptoms.*—There were 76 cases in which the number of days that the symptom of pain had been present was recorded; and by adding this period before admission—varying from one to sixteen days—to the duration of stay in hospital, the average total duration of these cases comes to forty days; or the average of duration, according to time of admission:—

Day of admission.	No. of cases.	Calculated average duration of Primary pyrexia.	Joint pains.	Total illness.
2nd	... 2	... 4·0 days	... 6·5 days	... 28·5 days
3rd	... 14	... 7·4 ,,	... 7·8 ,,	... 32·2 ,,
4th	... 8	... 8·4 ,,	... 11·5 ,,	... 31·0 ,,
5th	... 5	... 9·0 ,,	... 10·6 ,,	... 33·0 ,,
6th	... 13	... 12·4 ,,	... 15·2 ,,	... 35·8 ,,
7th	... 9	... 12·4 ,,	... 15·0 ,,	... 41·7 ,,
8th	... 11	... 12·5 ,,	... 13·6 ,,	... 40·0 ,,
9th	... 1	... 13·0 ,,	... 16·0 ,,	... 23·0 ,,
10th	... 3	... 36·0 ,,	... 17·0 ,,	... 68·0 ,,
12th	... 1	... 47·0 ,,	... 14·0 ,,	... 84·0 ,,
14th	... 8	... 20·6 ,,	... 23·1 ,,	... 66·0 ,,
17th	... 1	... 35·0 ,,	... 21·0 ,,	... 36·0 ,,

N.B. Calculated on the assumption that the pyrexia and joint pains existed during the whole period of illness before admission.

6. *Frequency of pericarditis, endocardial murmurs, &c.*—I must content myself with a very condensed summary of the results obtained from a statistical examination of cardiac complications.

Pericarditis was marked in 11 cases, or 18 per cent., as against 29·8 per cent. in 1872–3. Pericardial friction was audible on admission in three cases, became evident on the fourth, seventh, and seventy-seventh day (No. 81) in others. The duration of such signs varied from five, seventeen, thirteen, fifteen, to twenty days, and in one case was present with intermissions from the first to the fifty-seventh day. Although the average number of cases is low, yet it cannot be said that the drug had much influence upon it.

Endocardial bruits were present in a remarkably large number of cases, there being only 20 in which they were not detected at one time or another.

I find that apex systolic bruits—by far the most frequent of such signs—occurred in 21 cases on admission, that they were altered or added to by other murmurs in 5. In 10 cases such bruits were first noted at varying intervals after admission, and therefore whilst under treatment. Of the total number of 31 there were six cases in which these murmurs disappeared before discharge. These bruits were sometimes combined with pulmonary murmurs, which occurred alone in five cases.

Presystolic bruits occurred in 7 cases, and were altered or added to in 2. Murmurs denoting both mitral regurgitation and aortic obstruction were met with in 5, and were altered in 3 during their stay. Double mitral and aortic bruits occurred in 9 cases, and in one case there arose an aortic obstructive murmur after the patient's admission.

I am not prepared to say that all of the apex murmurs were due to endocarditis, but I cannot differentiate them; and if those cases in which the murmur faded are excluded from the category of organic change, there still remains a number largely in excess of the proportion usually noted.

7. *Other complications.*—These comprise pneumonia in 2 cases, pleurisy in 2, bronchitis in 6, and tonsillitis in 8. In 1 case there was localised muscular atrophy, evidently due to myelitis (No. 57); 1 case was prolonged by ascites and early cirrhosis of the liver; and in 1 an attack of rötheln occurred in the course (No. 81). Fibrous nodules over tendons &c. are noted in 2 cases.

8. *Toxic effects, or "salicylism."*—Symptoms attributable to the toxic effects of the drug itself, and of sufficient prominence to be noted, are recorded in 24 cases, or 28·5 per cent. Vertigo was complained of in 2 cases, headache in 8, tinnitus in 10, and deafness in 11. Delirium occurred in 2. Vomiting took place in 3—in 1 independently of the drug, which was in consequence given by enema. Abdominal pain was complained of in 2 cases. Retention of urine occurred in 3 cases, and was followed in one by cystitis. Albuminuria is noted in only one case, and in that in very small amount. It could hardly be attributed to the drug; and this solitary instance is in marked contrast with the results furnished by Dr. Isambard Owen.[2]

In 3 cases the toxic effects appeared under 120-grain doses—viz., on the second day in 2, on the fourth day in 1. The dose was reduced to 60 grains in one, to 20 in the other, and omitted in the third. In 15 of these cases the toxic effects were produced by 90-grain doses (per twenty-four hours), the average time for their appearance being, in 14 cases, on the 3·5th day. In one case deafness was not complained of until the fifteenth day, being one day after the drug had been omitted. In one case the symptoms followed doses amounting to 80 grains in the twenty-four hours. They disappeared on reduction of the dose, but recurred on raising it to 120 grains on the twelfth day, again disappearing on the fifteenth day, when it was reduced to 80 grains. In one case deafness occurred after three days on 90 grains and two days on 60 grains. In one deafness and headache did not occur till after the patient had taken 120 grains for five days, 80 grains for nine days, and 60 for thirteen days. In one case an enema given every four hours, by which 120 grains

[2] Amblyopia, it appears, must be added to the list of symptoms attributed to salicylism. At any rate, if a case related in the *Revista de Cieneas Medicas* of Barcelona, and quoted in the *Wiener Allgem. Med. Zeitung* for Dec. 20th, 1881, is to be so interpreted. A girl, sixteen years old, took eight grammes (about 120 grains) of salicylate of soda in ten hours. Three hours after the last dose she became blind, complained of headache, and somnolence. There was marked mydriasis, but the sensitiveness of cornea and conjunctiva was unimpaired. The fundus oculi was normal. Marked deafness. Heart sounds weak; pulse small. The *urine gave no reaction of salicylic acid*, nor of albumen. At the end of ten hours the amaurosis disappeared; the mydriasis and the deafness persisting for some time longer. Cases of slight visual disorder by Buss, Jürbringer, and Schulze are referred to; and also two cases of amaurosis in cinchonism by von Graefe.

TABLE B.—*Analysis of Cases in which Relapse occurred with reference to subsidence of primary symptoms.*

Pyrexia.

Day of treatmt. Subsidence of prim. pyrexia.	Number of cases.	One relapse.	Two relapses.	Three relapses.	Four relapses.
Bef. sod. sal was given	3 (*b c*)	1	0	0	0
1	8	2	1	0	0
2	20	4	2	1	0
3	20 (*b*)	3	0	0	1
4	10	2	1	1	1
5	3	1	1	0	0
6	0	0	0	0	0
7	1	0	0	0	0
8	1	1	0	0	0
9	1	1	0	0	0
10	2	0	0	1	0
11	1 (*b*)	0	0	0	0
12	1	0	0	0	0
13	2 (*d*)	0	0	0	0
14	2	1	0	0	0
15	0	0	0	0	0
16	1 (*a*)	0	0	0	0
18	2	1	0	0	0
22	0	0	0	0	0
23	1	1	0	0	0
24	1	0	0	0	0
28	1	0	0	0	0
35	1	0	0	1	0

Joint Pain.

Day of treatmt. Subsidence of joint pain.	Number of cases.	One relapse.	Two relapses.	Three relapses.	Six relapses.
Bef. sod. sal was given	2 (*c d*)	0	0	1 (*c*)	0
1	5	0	0	0	0
2	10	2	1	0	1
3	14	1	0	1	0
4	10	2	1	1	0
5	4	1	0	0	0
6	10	3	2	0	0
7	4	1	0	1	0
8	3	0	1	0	0
9	7	1	0	0	0
10	1	0	0	1	0
11	1	0	0	1	0
12	2	0	0	0	0
13	0	0	0	0	0
14	1	1	0	0	0
15	4	1	2	0	0
16	0	0	0	0	0
18	2	1	0	0	0
22	1	0	0	0	0
23	0	0	0	0	0
24	1	1	0	0	0
28	0	0	0	0	0
35	0	0	0	0	0

(*a*) Salicylate of soda was commenced on the 2nd day.
(*b*) " " " 4th day.
(*c*) " " " 7th day.
(*d*) " " " 10th day.

Summary of Relapses.

Of pyrexia: 13 with one relapse.
5 with two relapses.
4 with three relapses.
2 with four relapses.
—
29 in 82 cases.

Of joint pain: 14 with one relapse.
8 with two relapses.
6 with three relapses.
1 with six relapses.
—
29 in 82 cases.

Duration of relapses: Pyrexial—from 1 to 30 days.
Average, 7·2 days.
Articular—from 1 to 15 days.
Average, 3·5 days.

in all were administered for twenty-four hours, produced toxic symptoms, which were continued on giving 40 grains by mouth on the eighth day, reduced to 20 on the ninth, and 15 on the eleventh, when the deafness and tinnitus disappeared. In 2 cases doses of 60 grains (per twenty-four hours) produced slight symptoms, but the dose was not reduced, and the effect passed off.[3]

Lastly, it is said that salicylate of soda is a cardiac depressant. I am not aware whether this has been put to the test of physiological experiment, and it would be interesting to learn how far this supposed action depends upon the base with which the acid is combined.[4] I cannot afford much evidence either in support of or in opposition to this view; and it may be that the doses in which it was prescribed in these cases did not suffice to bring this serious effect to light. I must, however, mention one case—viz., No. 81—where there were severe vegetating endocarditis, little joint affection, a great tendency to high and irregular temperature, and towards the close pericarditis,—a case that proved fatal on the eighty-second day. The patient had not taken salicylate of soda all this time, and never more than 90 grains, which were prescribed on her admission. The drug was suspended on the ninth, and renewed on the sixteenth day, but none was given during the last thirty days of life. I fear that the result would have been the same under any treatment.

Although I cannot give analyses of the cases in which depressing effects were shown, I can state in how many cases stimulants were prescribed, and this may be taken as some indication of the number of cases in which the pulse flagged. This number was 25, and of these 8 were cases of pericarditis, and 1 of hyperpyrexia. It would be interesting to know whether in the presalicylic days alcohol was more often prescribed, although that would only be a very rough mode of estimation.

I believe that my colleague, Dr. Cayley, is in the habit of prescribing salicylate of soda in cases of enteric fever with the view of preventing pyrexial relapse, and if the drug had much depressing action on the heart it should be especially seen in such cases. The object it appears to me should be to give the drug in such amount that its toxic effects are not produced, but its remedial effects unimpaired. The comparative freedom of this series of cases from alarming toxic effects may be due to such caution being observed; not wholly, however, for it seems reasonable to believe that some of the severer symptoms described under "salicylism" are due to impurities with which the drug was more frequently mingled than now.

CONCLUSIONS.

1. That in the majority of cases salicylate of soda speedily reduces the pyrexia and articular pain of acute rheumatism.

2. That unless the administration be long continued, relapses both of pyrexia and of joint affection are liable to occur.

3. That such relapses are not *wholly* prevented from arising during the administration of the drug, and that in some cases they are distinctly due to the lack of proper precaution in matters of diet and rest, owing to the freedom from acute symptoms enjoyed by the patient.

4. That the best method of its administration is in regulated doses, gradually diminished both as to amount and frequency.

5. That no definite influence upon the cardiac or other complications can be observed (although in this series the number of cases of pericarditis was smaller than the average), and that, indeed, both pericarditis and endocarditis may develop whilst the patient is under its influence.

6. That the toxic effects described are serious in proportion to the largeness of the dose, and, perhaps, to the state of impurity of the drug, but that a few seem very tolerant of

[3] Whilst writing this I came across a clinical lecture by M. Raymond (*Prog. Méd.*, Dec. 3rd, 1881) upon a fatal case of acute rheumatism, with pulmonary complications. The patient was a lad, seventeen years of age, who presented great depression of pulse; no cardiac complications, but double broncho-pneumonia. On the afternoon of the day of admission he became violently delirious, then comatose, dying the same evening. He had been prescribed salicylate of soda in doses of two grammes (eighty grains) every three hours, and had taken the second dose an hour before the cerebral symptoms set in, or six hours before death. M. Raymond briefly acquits the drug of being the cause of these symptoms, as some might assert, and adds that, "although occasionally in inveterate alcoholic subjects with badly acting kidneys salicylate of soda may cause grave phenomena, yet it may most surely be affirmed to be innocent of the majority of those evils that have been attributed to it, and its adversaries of yesterday prescribe it to-day in large doses, like the rest of the world."

[4] Opposed to this suggestion is the fact that the urine hardly ever becomes alkaline under the use of the drug.

it (e.g., No. 84). Its alleged depressing action on the heart has to be proved by experiment, and may be due to the soda.

7. Salicylate of soda is certainly *anti-pyretic*, and, to a considerable degree, *anti-rheumatic*. That its employment does not appreciably diminish the time necessary to keep the patient at rest more than under other methods of treatment, but that the immense relief given by its use in the abatement of pain and fever—a relief not to be estimated by statistics,—renders it by far the most valuable remedy for the disease at present known.

I cannot conclude without adding my obligations to Messrs. Davis, Hartley, Minchinton, Sturridge, and Ranson, who have in turn held the office of resident physician's assistant during the period over which the above observations extend.

ON THE

TREATMENT OF ACUTE RHEUMATISM BY SALICIN AND THE SALICYLATES.[1]

By T. J. MACLAGAN, M.D.

WHATEVER difference of opinion regarding the use of the salicyl compounds in acute rheumatism may appear in the course of the discussion on this subject, there can be but one opinion regarding the value of the statistics which have been placed before us, and the lucid manner in which their details have been expounded. The evidence afforded by these statistics is highly favourable to the salicyl treatment. In that respect they agree with nearly all that has been written on the same subject by observers in all parts of the world. In the history of practical therapeutics there is no more remarkable circumstance than the unanimity and rapidity with which the salicyl treatment of acute rheumatism has replaced all other methods of treating that disease.

It is not my intention to place before the Society any fresh statistics of my own. My results have been given to the profession, and I would not now occupy time by repeating them in detail. I hold in my hand, however, a general statement of the results of the treatment of acute rheumatism in most of the large provincial hospitals of Great Britain to which I would for a moment direct attention. In answer to queries addressed to 59 hospitals, each containing 100 beds or more, I received answers from all except 14. Of the 45 from which answers were received, 2 have no experience of acute rheumatism, 2 decline to give information, and 2 have not tried the salicyl treatment. The general results got by the remaining 39 are embodied in the table on the next page.

The general results obtained in all these hospitals are quite in accordance with those got in the metropolitan hospitals, as exemplified by the statistics placed before us to-night. We thus find that the salicyl treatment of acute rheumatism has been all but universally adopted in the large hospitals of Great Britain, and with results which are on all hands proclaimed to be satisfactory. The only hospital statistics which seem at all to tell against this treatment are those from the Middlesex Hospital which Dr. Greenhow laid before the Clinical Society last year. It had always seemed to me that Dr. Greenhow's inferences were at variance with his facts. This it was my intention to have pointed out to-night; but the true value of Dr. Greenhow's facts, and the inconsistency of his inferences with these, have been so clearly demonstrated by Dr. Fagge that it is not necessary for me now to do more than express my entire concurrence in all that Dr. Fagge has said regarding them.

Passing from statistical details, I should like to make a few remarks on two points which have been indicated as being among those which might with advantage be discussed—first, is the action of the salicyl compounds anti-rheumatic or anti-pyretic? and, second, what is their best mode of administration?

First, as to their mode of action. An anti-pyretic is a remedy which allays fever; an anti-rheumatic a remedy which mitigates or stops the rheumatic process. In acute rheumatism the salicyl compounds both allay fever and stop the rheumatic process; and the point for us to consider is, which of these two is the real curative one.

Were an anti-pyretic action all that was required for the arrest of acute rheumatism, we should have more potent agencies in the external application of cold, and in the internal administration of quinine; for all observation shows that as anti-pyretics they are much more potent than salicin or salicylic acid. But they do not shorten the course of rheumatic fever as the salicyl compounds do. Were salicin and salicylic acid only anti-pyretic in their action, and were their curative effects in acute rheumatism due to this action, we should find them exercise a like action in other febrile ailments; but rheumatic fever is the only form of fever in which they exercise a distinctly curative effect, in no other ailment do they have anything like the same action. Moreover, to allay fever is not enough to stop the course of rheumatic fever, for the febrile state is not the only condition with which we have to deal in that disease; it is not even the most prominent or most characteristic. Much more essential to the rheumatic process is inflammation of the fibrous textures of the joints. This is the characteristic feature of the disease—it is the arrest of this which is essential to its cure,—and it is their power of arresting this that distinguishes the salicyl compounds, and imparts to them their remarkable therapeutic properties. All observers are agreed that relief of pain and alleviation of the local symptoms of acute rheumatism precede fall of temperature under the salicyl treatment. Were the curative effects of the salicyl compounds dependent on their anti-pyretic action the reverse would be the case, the fever would be allayed first and the rheumatic symptoms would decline later. A remedy which brings down febrile temperature would not suffice to arrest inflammation of the fibrous textures and all the symptoms dependent thereon. A remedy which arrests this inflammation would suffice to arrest the whole course of the disease. This is what the salicyl compounds do: they put a stop to the inflammation of the fibrous textures and all the symptoms, local and general, to which that inflammation gives rise. Such an action is more fitly described as anti-rheumatic than anti-pyretic, for the febrile disturbance is secondary to the local inflammation, and not the local inflammation to the febrile disturbance.

An intelligent appreciation of the mode in which the salicyl compounds arrest the rheumatic process, presupposes a knowledge of the nature and mode of production of that process. I have recently given to the profession my views of the pathology of rheumatism, and shall not enter on them now. I make this brief reference to the subject in order that the Society may understand what I have to say regarding the manner in which the salicyl compounds produce their anti-rheumatic effects.

Acute rheumatism I regard as a malarial fever; the rheumatic poison I regard as a malaria; and malaria I believe to consist of (and all recent research tends to confirm this view) minute organisms. The symptoms of acute rheumatism I regard as the result of the action of this special organism on the system. The local joint and heart affection are the result of the action of these organisms on the fibrous textures of the joints and heart. The salicyl compounds produce their anti-rheumatic effects not in virtue of any special action which they exercise on the system, but solely in virtue of their destructive action on this organism: they arrest the rheumatic process not by acting directly on the affected tissues, but by destroying the poison which causes disturbance in these tissues. During the course of this action the physiological effects of the salicyl compounds—that is, the evidences of their action on the system—are frequently manifested; but these effects, so far from being looked upon as essential, are observed with regret; we do not wish them, and are very sorry when they appear; but if it were their full action on the system that we wanted, we would give them till we did produce these effects, and would give them with that object. That we get the full curative effects of this drug in the majority of cases without its physiological effects, is evidence that it is on the rheumatic poison that they act, and not on the system.

This leads to the second point—their mode of administration. All evidence shows what, from the time that I first introduced this mode of treating acute rheumatism I have all along persistently maintained, that to get their full beneficial action the salicyl compounds must be given in full and frequently repeated doses. The view which I advocate as the mode of production of the rheumatic process, and as to the mode of action of the salicyl compounds, shows why this should be. The object in view is the destruction of the rheumatic poison. This object is attained by administering

[1] Remarks made at the discussion at the Medical Society of London on December 19th, 1881.

Name of Hospital.	Informant.	Mode of Treating Acute Rheumatism.	Results.	Remarks.
1. Northern Hospital, Liverpool	Dr. Rushton Parker	Salicylate of soda	"Well satisfied with them"	Reference to unpleasant physiological effects.
2. Southern Hospital, Liverpool	Senior House-Surgeon	Sal. of soda; occasionally salicin	"Most satisfactory"	
3. Royal Infirmary, Liverpool	Resident Medical Officer	Salicylate of soda and salicin	"Satisfactory"	"Salicin not ordinarily employed, unless depressing effects are feared from the use of the sod. salt."
4. Queen's Hospital, Birmingham	House-Physician	Salicylate of soda	"Pain relieved in 24 hours, as a rule"	"Sometimes causes noises in head, deafness, vomiting; also appears to produce a tendency to syncope."
5. General Hospital, Birmingham	Dr. Russell	" "	"Experience largely in favour of it"	Frequent relapses; one case of sudden death.
6. North Staffordshire Infirmary	Resident Medical Officer	Salicin and salicylic acid	"Symptoms subside in from 12 to 48 hours"	"Salicin is preferred, since it has seemed to cause less stomach and cerebral disturbance, and to be probably as effective."
7. Royal Albert Hospital, Devonport	" "	Salicylate of soda	"Satisfactory"	Very few cases.
8. Sussex County Hospital, Brighton	"House-Surgeon"	" "	"Looked upon as a specific"	See much rheumatic fever at Brighton.
9. Worcester Infirmary	" "	Salicylate of soda and salicin	"Very satisfactory"	
10. Taunton and Somerset Hospital	" "	Salicylate of soda	"Most satisfactory"	"Pain diminishes much more rapidly than under former methods of treatment."
11. Bristol Royal Infirmary	Mr. Watson	" "	"Free from pain and fever within 48 hours"	
12. Bristol General Hospital	Dr. Bryden	" "	"After 7 or 8 doses, pains abate"	
13. Chester General Infirmary	House-Surgeon	Salicylate of ammonia	"Favourable"	"In majority of cases temperature is normal in 3 or 4 days." Treatment does not prevent heart complications.
14. Hull Infirmary	Mr. Haggard	Salicylate of soda	"Checks the disease"	"The salicylates appear to cut short the acute symptoms rapidly."
15. Lincoln Hospital	House-Physician	" "	"Satisfactory"	"After 3 or 4 doses (15 to 20 grains) there is always a marked diminution of joint pain."
16. Devonshire Hospital, Buxton	Mr. Lorimer	" "	"Decidedly in its favour"	"The pain and temperature rapidly diminish when given in 20-grain doses every 2 hours."
17. North Devon Infirm., Barnstaple	Mr. Ware	Salicylate of soda and salicin	"Almost invariably good"	"The rapid reduction of temperature and relief from pain, and the shortness of the attack in uncomplicated cases, have been singularly gratifying."
18. Salisbury Infirmary	House-Surgeon	Salicylate of soda	"Relieves pain quickly"	"Rapidly reduces temperature and relieves pain. Salicin is sometimes borne when the salicylate nauseates."
19. Stafford Infirmary	" "	" "	"Temperature becomes normal, and pain ceases in from 12 to 48 hours"	"Slight head symptoms are produced in the majority of cases."
20. Derby Infirmary	" "	" "	"Lowers temperature and eases pain"	
21. Devon and Exeter Hospital	Dr. Blomfield	Salicin and salicylate of soda	"Rapid and great benefit"	"One of the physicians (Dr. Davy) almost invariably uses salicin, not salicylate."
22. Leicester Infirmary	House-Physician	Salicylate of potass and salicin	"Reduces temp. and relieves pain"	
23. Royal Hants Hospital, Winchester	House-Surgeon	Salicylate of soda	"Preferred to other methods"	"The temperature is almost always reduced and the pain relieved in from 16 to 20 hours."
24. Addenbrooke's Hosp., Cambridge	Mr. Shann	Salicylic acid	"Extremely satisfactory"	
25. Royal Berks Hospital, Reading	Mr. F. W. Sutton	Salicin and salicylate of soda	"Pain relieved, as a rule, within 12 hs."	"Remission of all symptoms is noticed within 48 hours. Dr. Philipson, the senior physician, regards the remedy as an all-powerful one."
26. Newcastle-on-Tyne Infirmary	Senior House-Surgeon	Salicylate of soda and salicin	"Very satisfactory"	
27. Children's Hospital, Manchester	Mr. C. R. Graham	Salicylate of soda	"Very good"	"Speedy relief of the joint pain and reduction of abnormal temperature."
28. Huddersfield Infirmary	House-Surgeon	Salicylate of soda and salicylic acid	"Quite satisfactory"	
29. Sheffield Public Hospital	" "	Salicylate of soda	"Satisfactory"	"Have seen one or two cases of marked cardiac depression when its administration in large doses has been too prolonged."
30. Sheffield General Infirmary	Mr. W. S. Porter	" "	"Very satisfactory"	"Will always be regarded from the patient's point of view as the one remedy for acute rheumatism."
31. General Infirmary, Leeds	House-Physician	" "	"Relief of pain complete"	
32. General Infirmary, Gloucester	Mr. Walter Brown	" "	"Reduces temperature and diminishes pain and swelling"	
33. Netley Hospital	Prof. de Chaumont	" "	"An efficient remedy"	Prof. Maclean has found salicylate produce "extreme depression and failure of the heart; some men have been put in extreme peril"; but "it relieves suffering quicker than any remedy with which I am acquainted."
34. Edinburgh Infirmary	Dr. Muirhead	" "	"Satisfactory"	
35. Glasgow Royal Infirmary	Prof. Charteris	Salicin and salicylates	"Invariably satisfactory"	"Preference is given to salicin over the salicylates. I took up the treatment sceptically, but was soon convinced of its manifest advantages."
36. Glasgow Western Infirmary	Prof. Gairdner	Salicin	"Very satisfactory"	"Have always favoured salicin as *versus* salicylates. Have not found it produce any unfavourable symptoms."
37. Aberdeen Infirmary	Prof. Smith-Shand	Alkalies, quinine, salicin	Not noted	"Have of late seldom prescribed salicylate of soda, on account of the disagreeable symptoms it so frequently produces."
38. Dundee Infirmary	Dr. Maclagan	Salicin and salicylate	"Very satisfactory"	Salicylates often caused gastric and cerebral disturbance; salicin produced no unfavourable results, and was equally potent."
39. Belfast Hospital	House-Surgeon	Salicylic acid and salicylate of soda	"Very great advantage"	

the salicyl compounds. The larger the quantity that can be thrown into the system in a given time, the more rapid will be the destruction of that poison. The salicyl compounds are very rapidly eliminated from the system, hence the necessity for giving them frequently as well as in full dose. What is wanted is the presence for some time in the blood of as much of this anti-rheumatic agency as can well be borne.

An important part of the question of the mode of administration of the salicyl compounds is, Which of these compounds is best borne by the system? Salicin and salicylic acid, be it borne in mind, are only two of a numerous series of salicyl compounds, all of which may be possessed of anti-rheumatic properties. From observations made with saligenin and salicylous acid I feel sure that they are anti-rheumatics. Practically we have to deal only with salicin and salicylic acid (generally given as salicylate of soda). Salicylate of soda is most used; but no one who has used it much can have failed to notice its deleterious effects on the system. Many instances have been recorded, and their number is being swelled in almost every journal that we read, in which more or less disastrous effects have been produced by it—delirium, insanity, prostration of the vital powers, syncope, and even death. Salicin is equally powerful as an anti-rheumatic, but it produces none of the deleterious effects of the salicylates. In several cases, some of which I have recorded, I have given full doses of salicin to patients suffering from the depressing and disturbing action of salicylate of soda; and under its use (though, of course, not in consequence of it) the depressing effects of the salicylate have disappeared.

In the statistics which I have laid before the Society to-night it will be seen that salicin is used in eleven of the thirty-nine hospitals named; in two of the eleven it is used to the exclusion of the salicylates. While the salicylates are frequently said to produce bad effects, not a single reference is made to any bad effects following salicin. In most cases the deleterious effects of the salicylates pass off with the omission of the drug; but to have to omit it is a serious drawback, for its early omission is most likely to be followed by a renewal of the rheumatic symptoms.

Whether or not the salicyl treatment of acute rheumatism diminishes the frequency and danger of heart complications, is a point on which I have not time to enter. I believe that to some extent it does. But I believe also that when those occur the treatment by salicylate of soda occasionally increases the patient's danger. I refer specially to those cases, more numerous than is usually supposed, in which the muscular substance of the heart is the seat of inflammation. Myocarditis has for its pathological condition thickening, softening, and enfeeblement of the muscular walls, chiefly those of the left ventricle. If to this enfeeblement is added that which sometimes follows the administration of salicylate of soda, the patient's condition is thereby rendered more serious, and the continued administration of the salicylate might turn the scale against him.

One word on relapses. These are generally said to be more frequent under the salicyl than any other form of treatment, though Dr. Owen's statistics would seem to indicate that this is more apparent than real, and may be a mere result of more attentive observation. There is no doubt that the salicyl treatment has to be kept up for some time after the symptoms have abated, and that their too early omission is apt to be followed by a return of the symptoms. But the term relapse as applied to acute rheumatism I believe to be pathologically erroneous. Dr. Southey has divided cases of rheumatic fever into the continued and the relapsing. But rheumatic fever never is a continued fever as that term is usually applied in medicine: it never goes through a continuous and regular course, but varies extremely in different cases both in course and duration, and in its progress from day to day. It is really a remittent fever, while the milder and subacute cases are intermittent in nature, and many of the so-called relapses are but the natural intermissions of the disease, which occurred even more frequently under the alkaline than under the salicyl treatment, as Dr. Owen's statistics have shown us. The knowledge that the symptoms are apt to recur is a reason for going on with the salicyl treatment till all danger of an intermission is over.

Hyperpyrexia is no essential part of the rheumatic process. It is one of its rarer complications, and is to be regarded as peculiar to the individual in whom it occurs, rather than as essentially pertaining to acute rheumatism. All evidence shows that it is not at all benefited by the salicyl compounds. They are quite inoperative in it. The external application of cold is the remedy for this condition.

A CASE OF PUERPERAL SEPTICÆMIA AND CONVULSIONS.

WASHING OUT OF UTERUS ANTISEPTICALLY; RECOVERY.

BY J. S. BUCK, M.R.C.S., L.R.C.P. ED.

MRS. M——, married, aged twenty-eight, a multipara, aborted on Thursday, Oct. 27th, 1881. She was said to have been about three months pregnant, and was attended by a village midwife, who stated that "all the membranes came away whole," but that the patient lost a good deal of blood. On Saturday, the 29th, her husband came to me, and said his wife had had no sleep since her miscarriage, and was a "bit light-headed." I sent her a draught composed of thirty grains of bromide of potassium and twenty grains of hydrate of chloral, and sent word that I would see her on the morrow if she was not better. She slept well that night, and was much better till I was sent for on the following Tuesday (Nov. 1st). On my arrival I found her lying in bed on her back, with her knees drawn up. Her countenance presented that peculiar sallow appearance usually seen in patients suffering from puerperal septicæmia. She appeared in a semi-conscious state. Temperature 104° F.; pulse 138, very small and thready. She had no lochial discharge whatever (this, I was informed, had ceased on Oct. 31st, the day previous to my seeing her). I ordered her one ounce of brandy every three hours, and gave her a mixture containing five grains of carbonate of ammonia, twenty minims of spirits of sulphuric ether, and one ounce of decoction of cinchona every four hours. On Nov. 2nd patient seemed rather weaker if anything. Temperature 104·4° F.; pulse 140, very small and thready. I continued the same treatment, only ordered the brandy every two hours, and repeated the chloral and bromide draught, as she had not slept. On the 3rd, at 4 A.M., she had an attack of convulsions, which lasted about an hour, and in them she bit her tongue rather severely. At 2 P.M. she had another attack of convulsions, lasting about an hour and a half. On my visit she had a slight yellow discharge, which the nurse said smelt very badly. Temperature 104·4° F.; pulse 138, weak and thready. So I determined to wash out the uterus antiseptically. This I accomplished fairly easily, as I found the os uteri would admit the tips of two fingers nearly. I injected a quart of tepid weak solution of permanganate of potash, which brought away a quantity of very offensive matter and shreds of membranes. I continued the brandy and ammonia treatment. On the 4th I was surprised to see the change in the patient. She had slept well without a draught. The pain in the abdomen which she complained of the day previous had ceased, her temperature had dropped to 101·6°; her pulse was 120, much fuller and stronger, and she had had no more convulsions. I determined to give her another intra-uterine injection, which I did with some little difficulty, as I found the os somewhat smaller than on the day previous. I injected the same amount and of the same character, and brought away a few shreds of membrane, but it was not offensive at all. I ordered the brandy every four hours, and continued the ammonia and bark mixture. On the 5th she was much brighter and better. Temperature 101°; pulse 120. She slept well; no pain. She said she felt hungry. I ordered the same treatment. On the 9th the patient was progressing well. Temperature 99·4°; pulse 96. She said she felt well and wanted to get up. I ordered her ten minims of dilute nitric acid and an ounce of the decoction of cinchona three times a day. On the 12th she was out of bed for about an hour. Temperature 99°; pulse 88; going on very well.—21st: Since the last note the patient had improved very much, and she is able to sit up all day. She takes her food well and sleeps well; has no discharge, and her temperature and pulse are normal. I have been giving her ten minims of the solution of dialysed iron three times a day, after food, and I ordered her to continue taking it.

I think this case shows the good effects of antiseptically

washing out the uterus in such cases. Dr. Playfair, in his "Science and Practice of Midwifery," speaks very highly of the practice, especially in those cases of "autogenetic origin," or self-infection as he terms them; and, certainly in my case, the effect was marvellous.

Chatham.

A NEW FORM OF GUIDE CATHETER.

By E. H. HOWLETT, F.R.C.S.,
RESIDENT SURGICAL OFFICER, MANCHESTER ROYAL INFIRMARY.

EVER since the introduction into urethral surgery of "guide bougies," various plans have been devised for removing the conductor whilst leaving the catheter in the bladder; but the methods employed seem not to have met with complete success. By a simple mechanical contrivance this difficulty has been overcome in the instrument mentioned below, whereby the risk of the conductor being broken off in the bladder is reduced to a minimum. The instrument consists of an ordinary metal catheter, the point of which is perforated by a small hole sufficiently large to permit of the passage of the "ferret." The stilet consists of a gum elastic bougie, similar to that commonly in use, and to which the attention of the profession has recently been drawn by Mr. Teevan. To the end of the bougie is riveted a metal point, accurately moulded to the interior of the catheter, and in which is sunk a female screw. The ferret is of the ordinary form, with a well-made screw-mount. In using the instrument the ferret is first passed into the bladder. The catheter, with the bougie *in situ*, is then screwed on, and, owing to the accurate moulding of the bougie-tip to the interior of the catheter, this is an easy matter. Once in the bladder the bougie, and, with it the conductor, is withdrawn. The catheter can then be tied in or withdrawn, according to the requirements of the case. In cases of retention of urine, and in all cases of difficult stricture in which a metal catheter is to be retained, the instrument will be found very serviceable. The advantages claimed are greater safety to the patient, a saving of expense, in that it obviates to a considerable extent the use of the flexible catheter a boule, a matter of considerable importance both in hospital and private practice, whilst at the same time the catheter, if required, can be used without the ferret. All the advantages of the solid bougie over the stilet are retained; also the bougie may be utilised as a flexible probe.

Mr. Wood, of King-street, Manchester, from whom the instrument can be obtained, has taken considerable pains in its construction, and by adopting a uniform mount to the ferret damaged ones can be more easily replaced. The smallest size at present made is No. 2 English gauge.

CASE OF FLESHY TUMOUR OF UMBILICUS, WITH PATENT URACHUS.

By JOHN GAY FRENCH, M.D., F.R.C.S. ENG.,
LATE CIVIL SURGEON OF DACCA, BENGAL.

ON June 30th last I saw, in consultation with the late Dr. Bestall of Oldham, a case which, from its rarity, may be placed on record. There was a fleshy tumour of the umbilicus, with a patent urachus, in a female infant aged about six weeks. Mr. Bryant, after his extensive practice, states that he saw only one such case, and in it he was not allowed to operate. In our case there was a hernia-like protrusion of skin, of about three-quarters of an inch in length, surmounted by a red fleshy outgrowth, like a swollen and fungoid glans penis. Whenever the child cried or struggled, this growth became very prominent and vascular; and through a small opening urine was expelled. The aunt (for the mother would not assist at the consultation) stated that the urine constantly flowed from the umbilicus, and that the "lump" was growing rapidly. In order to stop this and close the canal, we advised operative interference, and after pointing out the advantages, dangers, &c., the relatives agreed to place the child unreservedly in our hands. Next day I operated, Dr. Bestall holding the infant and assisting me. Having ascertained that no knuckle of intestine was in the way, a harelip pin was driven through the fleshy mass, at its junction with the cuticle, and transversely with the body axis. Underneath this pin, and at right angles to it, a needle armed with a stout double ligature was passed, and the threads drawn through. These were then tied tightly on each side under the pin, and the tumour was strangulated. Small pads were placed under the pin ends, and a pad of dry lint over all, with a bandage round the body. When examined on the third day the pin and fleshy mass came away with the lint pad, exhibiting a clean, granulating sore. As the child was crying, it was dressed quickly with zinc ointment, and a pad as before. On the tenth day, when I again saw it, the sore was entirely healed, and covered with cuticle; no urine had passed through it since the day of the operation, and the relatives were much pleased with the result. As a precaution against protrusion, we advised the use for a while of an umbilical truss. Although the treatment was very simple yet the case is very interesting.

Bournemouth.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

RUPTURE OF LUNG; PNEUMOTHORAX; PARACENTESIS; RECOVERY; REMARKS.

(Under the care of Mr. A. PEARCE GOULD.)

THE following interesting case (for the notes of which we are indebted to Mr. Larder) should be read in conjunction with a remarkable case of traumatic pneumothorax from swallowing a fish-bone, under the care of Dr. Cayley, and published in our "Mirror of Hospital Practice" on Nov. 12th, 1881.

W. E——, aged six, was admitted into the Henry Hoare ward on the evening of Sept. 14th, 1881. The policeman who carried the child to the hospital stated that he had been knocked down by a cab, and that two wheels had passed over his belly. A transverse fracture of the shaft of the left humerus just below the middle was the only injury of a bone detected. The boy complained of pain and tenderness over the right hypochondrium. He was sick four times in the night. There was neither hæmaturia nor hæmoptysis. On the following day he was very blanched, lying flat on his back, and in a muttering delirium, though conscious when roused; temperature 99·6°; pulse 160; respiration 64. A bruise showed itself over the right ilium. There was movable dulness in the left flank half-way forward to the umbilicus.

On the 16th he was seen by Mr. Gould for the second time, at 10 P.M. He was then sitting propped up in bed on his right side; if moved he at once resumed this position. The breathing was between 60 and 70 a minute, very short, and with a hissing noise made by the lips. No working of the alæ nasi; no lividity. Pulse too frequent to be counted, and small. The movements of the right side of the chest were very free, and the breath-sound was exaggerated. On the left side the intercostal spaces were wide, the walls were fixed, and the percussion note was tympanitic; respiratory sound amphoric, with metallic tinkle and bell-sound very distinct; heart's apex beat at the xiphoid cartilage. Temperature 102·8°.

A small trocar was introduced into the tenth intercostal space below the angle of the scapula. Air at once escaped with a loud hissing noise, and then in small whiffs at each expiration; there was no sound of air being sucked into the chest, but lint soaked in carbolic lotion (5 per cent.) was held over the end of the cannula as a precaution. After about twenty

breaths the boy began to cough, and some bright blood escaped from the cannula, which was then withdrawn and the puncture closed with dry lint. The relief was most marked and instantaneous. The boy lay on his back; respiration 48, not nearly so distressed. Apex beat of the heart was in the normal situation. The physical signs of pneumothorax had disappeared, and a vesicular respiratory murmur was heard all over the left front and axilla. Dr. Markham Skerritt, who happened to be present, verified the physical signs. On the 17th there was no return of extreme dyspnœa; he lay flat on his back; no pneumothorax, but signs of a small quantity of fluid in the left pleura; no friction. Dulness in left flank as high as nipple-line, which entirely disappeared on turning him on to the right side. Temperature, 11 A.M., 99·6°; at 9 P.M., 101·4°.

From this time the boy made an uninterrupted recovery; the dulness in the left flank disappeared and was not observed after Sept. 18th; the dulness at the left base behind also cleared up, and the breath sound, which had been weak and bronchial over the back, became vesicular and in every way normal by Sept. 24th. The temperature continued normal after Sept. 19th. The fracture of the humerus was put up at once in dextrinised millboard splints over a cotton-wool pad. The bone united firmly. The boy left the hospital on Oct. 6th. He was last seen on Nov. 9th, when he was quite well, and there was no indication of his former trouble. The breath sound on the left side was everywhere loud and vesicular.

Remarks.—This case shows the possibility of an injury in a child causing rupture of the lung without fracture of a rib or even external bruise. From the gradual development of the symptoms of the pneumothorax it is probable that the rupture was small. When the boy's chest was tapped he was *in extremis*, and it was clear that unless at once relieved he would quickly die. The operation was devoid of danger, but it was feared that air might escape again through the wound in the lung, and necessitate a repetition of the tapping. The chief point of interest in the case lies in the fact that the air was apparently completely evacuated from the pleura at once and did not reaccumulate. The compression to which the lung was subjected by the air for some few hours before the tapping had probably assisted the closure of the presumably small wound. The instant expansion of the compressed lung also suggests some modification of the generally received notion of the cause of the expansion of the lung; it must not, of course, be compared with the behaviour of the lung in paracentesis for pleurisy or empyema, where the compression is of longer duration and attended with inflammatory thickenings and adhesions on the surface. But the case, at any rate, shows that opening the pleural cavity does not necessarily cause collapse of the healthy lung, and is not even inconsistent with its expansion. But the next danger feared was pleurisy, but it did not supervene, and the blood in the sac, like that in the belly, was soon absorbed. The rapid fall of temperature from its high point almost immediately after the tapping is worthy of notice.

EAST LONDON HOSPITAL FOR CHILDREN.

TUBERCULAR PHTHISIS; DISEASE OF ANKLE-JOINT; AMPUTATION; PRIMARY UNION; TEMPORARY ARREST OF GENERAL SYMPTOMS; SUBSEQUENT RELAPSE AND DEATH; REMARKS.

(Under the care of Mr. PARKER.)

FOR these notes we are indebted to Mr. Scott Battams, resident medical officer.

Blanche C——, aged eight years, was admitted, May 3rd, 1881, with strumous disease of her right astragalus and tubercular disease in both lungs. Parents dead; father of phthisis, mother of rheumatic fever. There are three other children; one suffers from enlarged glands and abscesses in the neck; the other two are healthy. The child's stepmother had a child by the father of patient, which died a few hours after birth. This child did not walk till she was three years old, although she appeared fat and well. The foot first became affected in November, 1880, after a supposed sprain. In the following February an abscess was "lanced," and it continued to discharge at the time of admission. She had a bad cough and sweats at night. She had wasted, and was still wasting much.

On admission the right foot was much swollen, the tissues were œdematous. There was a soft puffy swelling over the tibio-astragaloid joint, extending beneath the extensor tendons, and also on either side of the tendo Achillis. There was an ulcerated opening (size of a shilling) at the lower end and in front of the external malleolus. A small probe could be introduced, but there was no bare bone to be felt. There was another and larger opening below and behind the internal malleolus. The ankle-joint was obviously opened and suppurating, but no grating could be felt in the joint; there was but little discharge, but great pain on the slightest movement. The patient was very emaciated; her skin was dry and harsh; her eyes were much swollen; the inguinal and cervical glands could be plainly felt on each side; there was dulness at both apices, more marked behind than in front, with bronchial breathing and moist clicking rhonchus over the greater part of the chest; the finger tips were rather clubbed.

On May 26th the child's condition had remained without visible alteration. The foot was very painful; caused starting pains at night, and great dread was felt at each dressing. A consultation was held as to the advisability of amputation in the view of removing what was a source of great irritation as well as of pain, although the condition of the chest precluded any hope of more than temporary relief; for the child was obviously in a condition of rapidly advancing tubercular phthisis. Temperature, evening, 101·6° F. On the 27th, Teale's operation (as modified by Gaelide, by leaving a piece of periosteum to hang over the edge of the cut tibia) was performed under full Listerian precautions. On examining the foot after its removal, the astragalo-scaphoid and calcaneo-cuboid joints were found intact; the calcaneo-astragaloid joint showed vascular fringes. The astragalus was surrounded by vascular pulpy granulation tissue; its articular cartilage was eroded, and the bone beneath fungating. The lower end of the tibia was in a similar condition. There was some slight sero-sanguineous discharge, which necessitated change of dressing in the evening. On the 31st the wound was redressed; it looked well. The patient had slept well since the operation, was quieter, and ate better. She had no pain now.

On June 3rd, redressed. Edges of wound united. Four days later the drainage-tube was removed. On the 17th the stump was quite healed, and on the 29th the child was sent into the country. Immediately after the operation the temperature, which had ranged previously from normal in the morning up to 103·4° in the evening, came down. Thus, on 28th, it was normal in the evening; on the 31st it was 99·4° in the evening. It fluctuated slightly between this time and her discharge; but it was always two or three degrees lower than before the operation.

July 7th.—The physical signs in the chest, dictated by Dr. Eustace Smith, were as follows:—Dulness in upper third of both backs; wooden percussion sound elsewhere. Respiration in the right supra-spinous fossa weak and cavernous; below, loud and blowing. Over scapular region, from angle to base, loud and harsh. In the upper third of left back respiration is weak and bronchial, with some faint clicks at end of inspiration. Right apex, in front, is dull to second rib. Respiration weak and cavernous above clavicle; loud and cavernous below. From second rib to base loud and blowing. Left front, above clavicle, percussion high-pitched; respiration bronchial. Over rest of left front respiration very loud and harsh. No venous hum at top of sternum with head back.

On August 12th the child attended as an out-patient shortly after her return from convalescent home. The following note was then made:—Skin hot; breathing frequent; complains of pain in chest after food. The physical signs in the chest are again asserting themselves, but are not so marked as when she was first admitted. She looks well in the face, but is very thin. The stump was firmly healed. A very cautious prognosis was given, and she was sent home with orders to be kept quiet, to paint the chest with iodine, and take cod-liver oil.

Sept. 9th.—The mother called to say that the child had died a week ago. No autopsy was made.

Remarks by Mr. PARKER.—This case is interesting in relation to the subject of "Operations in Visceral Disease," recently discussed in THE LANCET. I was induced to operate in consequence of the great pain which the diseased ankle seemed to cause; for although the child was of a hypersensitive disposition, it was obvious that there was real

danger from this source. The marked subsidence of thoracic troubles seems to have justified the operation. It is to be regretted that the child's social position prevented our taking those precautions which, under other circumstances, might for an even longer period have staved off the final result. The rapidity with which the wound healed (under Listerian dressings) at least shows that the presence of tubercular disease in the lungs is not an absolute impediment to operations in similar cases and for a similar purpose. I will not pretend to argue whether the lung disease was a secondary product of the ankle-joint mischief, though Buhl and his followers would, I fancy, find no difficulty in establishing such a sequence. It would be difficult, nevertheless, to disprove the view, that the two affections are expressions of one and the same "dyscrasia." In this particular case there was a strong hereditary tendency to the tubercular habit.

RADCLIFFE INFIRMARY, OXFORD.

PARALYSIS, PROBABLY SYPHILITIC, AFFECTING IN RAPID SUCCESSION BOTH LEGS AND BOTH ARMS; IMPAIRED VISION; OPTIC NEURITIS; GRADUAL RECOVERY UNDER LARGE DOSES OF IODIDE OF POTASSIUM.

(Under the care of Dr. TUCKWELL.)

FOR the following notes we are indebted to Mr. J. E. Hine, M.B. Lond., senior resident medical officer to the infirmary.

N. H——, aged thirty, was admitted on Feb. 16th, 1881. The patient was married and had had two children. The last pregnancy was twelve months prior to admission. There was a doubtful history of an abortion six months before. No distinct history of syphilis could be obtained, but there were strong reasons for thinking that she had been exposed to the infection. She stated she was never ill before in her life, except with slight sore-throats fifteen years ago. The present illness began on February 6th, 1881. She stated that she felt quite well when she got up in the morning, but during the day she had aching pains in her ankles and legs, and she noticed that her legs gave way under her when she tried to walk, so that she was unable to go upstairs at night. In addition to the pain, she had tingling feelings in the legs, and her feet felt very cold. She had no pains in the back or round the waist, no difficulty in breathing, and no affection of the sphincters. She stated that for the first week her hands and arms were unaffected, but that from February 14th they had gradually lost power, without any numbness or unusual sensations in them. She had always been short-sighted, but her sight was now dim in the morning.

Her state on the day after admission was as follows:—She lay in bed helpless. She was a well-nourished, rather big woman, with a florid complexion. There were no scars or other indications of syphilis. She was unable to raise either foot from the bed, and could only just flex the legs at the knee. The right leg seemed to have slightly more power than the left. She could not flex the ankles or the toes. She was quite unable to stand. She could not raise herself into the sitting posture, owing, she said, to weakness in the back. She could move both arms freely; but the grasp of her hands was distinctly lessened. There was no paralysis of any facial muscles. The muscles of the eyeball acted normally; those of the chest and abdomen were unaffected. There was no rigidity or tremor in the extremities; no fibrillation in the muscles; no sign of muscular wasting. The circumference of both calves was eleven inches and a half. When she tried to pick up a pin she had difficulty in doing so, owing to numbness of the fingers. There was also slight incoördination of movement. She had no headache, and no pain in the back or round the waist; but she had now and then sharp shooting pains in the back of the legs from the knees downwards, severe enough to awake her at night. Both her legs felt numb as high as the knees; but above the knees the sensation was natural. All the fingers of both hands also felt numb. There was perfect anæsthesia below the knees, both to tactile and painful impressions. The patient was unable to feel, and did not give any sign of feeling a sharp prick with a pin. This anæsthesia extended above the knees, but was less marked on the outer side of the thighs. Over the region of the buttock she could feel quite well, the area of normal sensation joining that of anæsthesia about the level of the great trochanter. She was unable to feel a hot sponge applied to any part of her legs, but at the upper part of the thigh she said it felt "like a pin pricking." The fingers of both hands were anæsthetic. The feeling in the palms was diminished. She could feel and localise fairly well on the backs of the arms. The patellar tendon-reflex was quite abolished, and there was no ankle clonus. The pupils were not dilated, and reacted well to light. Ophthalmoscopic examination showed the margin of left optic disc blurred and indistinct and the veins large. There was also blurring of outline of the right disc, especially in its lower half (in the image), but less advanced than in the left eye; veins large. There was no reaction in the legs to faradisation. The patient slept well; the appetite was good. Temperature normal. The heart, lungs, and other organs of the body were healthy. The urine was free from albumen. She had perfect control over the sphincters.

On February 23rd the anæsthesia was absolute over both hands and forearms, and she could only just feel the prick of a pin over the biceps. Sensation was more marked over the deltoid muscle than on the inner surface of the arm. The grasp of the hands was much weaker than before, and the incoördination on movement was more marked. On the 26th the patient had very bad nights, owing to the pains in her legs. She complained also of pain if the legs were flexed at the ankle or knee. There was no rigidity and no wasting.

On March 7th she had a convulsive attack, which began with twitching of the right hand and right side of the face, and lasted twenty minutes, the legs remaining rigid after the fit was over. On the 8th the rigidity of the legs had passed off, but she complained of great pain if they were flexed. The incoördination in the hands was still more marked, so that she could not pick a pin up. The hand and arm had a jerky, almost rhythmic movement, resembling that of a mild case of disseminated sclerosis. On the 13th there was increased paralysis of the left hand; the grasp was very feeble. The right hand remained as before. On the 22nd she could draw up both legs, but could not lift them off the bed. The anæsthesia was the same as before, but the pain in the legs had gone, and was less severe in the feet. There was slight improvement in the movements of the right hand; she could now feel the prick of the hypodermic syringe in the arm.

Ophthalmoscopic examination.—Left eye: Well-marked optic neuritis; clouding of the retina round the disc and swelling of the disc itself. The arteries could scarcely be seen; the veins were large.—Right eye: Outer half of the disc obscure, inner half dull; veins large, arteries indistinct. There was some atrophy of the interossei muscles of both hands, especially of the muscle in the first space. No fibrillation in the muscles.

On April 6th the pain was still present about the ankles and feet. Circumference of right calf 11½ in., of left 11 in. On the 16th she was rapidly regaining power over the lower extremities, so that she could walk with assistance.

On May 4th there was marked improvement in the power over the fingers. She could pick up a pin with comparative ease. On the 13th the left disc was less blurred in its outline, the veins were smaller, and the arteries more distinct. The vessels still tilted over the edge of the disc. In the right eye the inner half (in image) of the disc was now clear, and the outer half was blurred, but the vessels were normal. The patient had done a little sewing. The muscles of the thumb were filling out again. On the 17th there was no reaction whatever to the strongest faradaic currents in either leg below the knees. The patient could not feel the current. Above the knees the muscles reacted well. In the arms the muscles of both reacted, but those of the right arm better than those of the left. A current which produced no reaction in the muscles of the thumbs caused a distinct contraction of the deltoids. To the constant current the reaction was diminished below the knees, a contraction being produced only by a strong current. Reaction was slightly diminished in the arms. The anæsthesia of the upper extremities was certainly less marked now than before. On the right hand and arm she could feel and localise the lightest touch. The sensation on the left hand and arm was impaired. She could not distinguish two sharp points placed simultaneously on the skin of the arms at a distance of four inches apart. Beyond this distance she could do so. On the right leg, when first tested, she apparently felt nothing; but after testing with a pin for some minutes by degrees she was able to feel, and ultimately to localise accurately. The same was noticed on the left side. She could walk now with help

dragging the left foot more than the right, and stamping her feet flat down with a somewhat tremulous motion. Incoördination in the hands was still present, but not to so great a degree as before. She could not make her fingers meet when brought towards each other from a distance, even when she was looking at them. The atrophy of the interossei was still present to a small extent. The patient left the infirmary, and went to the Headington Convalescent Home, on August 3rd.

On October 26th her condition was as follows:—She could raise her legs from the bed and keep them up in the air steadily. She was able to walk about her house and to go upstairs without difficulty, and no longer dragged her feet in walking. There was still marked anæsthesia below the knees. On the feet she could not feel light touches with the finger, or even sharp pricks with a pin, but she was able to feel the prick on the legs, and better on the posterior than on the anterior surface. Above the knees she felt the lightest touch. There was no patellar tendon-reflex on either side. The reaction to faradisation was greatly diminished below the knees; but whereas at the time of her admission the strongest current failed to produce a contraction, now a comparatively weak current caused a distinct contraction in the right leg. The left leg, however, failed to respond at all. There was great improvement in the arms. The incoördination of movement had nearly disappeared. The grasp of each hand was as strong as it ever had been. There was no loss of electrical excitability, and there was no anæsthesia. The pain she used to suffer from in her legs had quite left her. On ophthalmoscopic examination the right disc appeared quite normal. The left disc was still rather blurred in outline in the lower and outer fifth of its circumference, and a large vein coming from below appeared to tilt over the margin at this point. Vision was unimpaired.

The patient was treated throughout with large doses of iodide of potassium and galvanism.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tumours arising in Skin Glands of the Dog, showing the connexion between Disorder of the Secreting Structure and Function and Cancerous Invasion of the Connective Tissue.

THE ordinary meeting of this Society was held on the 10th inst., Dr. Barclay, President, in the chair.

The Hon. Sec. (Mr. B. Hill) read a letter from Sir W. Mac Cormac, Hon. Secretary General to the International Medical Congress, 1881, forwarding to the Society a copy of the commemoration medal in recognition of the liberality and hospitality of the Society in throwing open its library to members of the Congress. On the motion of the President, thanks were unanimously voted to the Executive Committee for their gift.

Dr. CHARLES CREIGHTON communicated "Three cases of Tumour arising in Skin Glands of the Dog, showing the connexion between Disorder of the Secreting Structure and Function and Cancerous Invasion of the Connective Tissue." 1. The glands in the dog's skin, which were the seat of tumour-formation in three cases, are not sweat-glands; it is only in the soles of the feet that the ordinary glomerular sweat-glands occur in the dog. The secretion, as observed within the glands in section, is sometimes a viscid mucus-like fluid, and at other times a compact mass of large spherical cells of yellowish-brown colour, and granular substance, obviously transformed epithelial cells. The convoluted glandular tube has a wide lumen, and is distinguished and always easily identified by the well-known coat of plain muscular fibres, forming a close and uniform membrane, on which the epithelial cells directly rest. Glands of the same kind occur in man in the form of a lobulated patch of a yellowish substance, adhering to the under-surface of the skin at the highest point of the axilla. It varies much in its extent and is often wanting. A homologous gland, of a conglobate form, is found in the platypus (monotreme) under the skin at the end of the humerus. It was erroneously described by Meckel as a lymphatic gland. The glandular stratum of the human axilla may extend towards the pectoral region, and may become the seat of a tumour. 2. Two of the tumours from the dog's skin exemplify the infiltration of epithelial glandular products into the spaces of the connective tissues around the glands. In the appearances described and figured from these two cases, the author finds support for the doctrine of extra-glandular accumulation of solid or cellular products of the secretion, as already put forward by him for the breast. The origin of the tumours is to be referred not to a disorder of glandular structure, but to a disorder of glandular structure and function. 3. The third tumour was a true cancer (scirrhus), proceeding from the same glands in the skin of the dog's back; a coil of intact glandular tube, as figured, is encountered here and there in the sections of the tumour. The cancerous element in the third tumour consists in the extension of disease to the connective tissue; the connective-tissue corpuscles are *infected* by epithelial cells in such a manner that they assume the characters of the epithelial cells, from which the infecting influence issued. The epithelial cells exercise that infecting influence, both in their normal position on the walls of the glandular tube, in which case the rows of cells next to the basement membrane are the first to transform themselves into the likeness of epithelium; and the same infecting influence may be exercised by those glandular cells that are carried into the spaces of the connective tissue, in which case the infection does not spread from the margin of the glandular tube outwards, but it breaks out at independent points in the stroma. The transformation of connective-tissue corpuscles into epithelial cells is described and figured in detail. A certain condition of the stroma, most usually occurring after middle life, is supposed to be favourable to the establishment of a cancerous infection in an epithelial organ, or part in which there has been disorder of function.—Mr. BUTLIN said that some years ago we were asked to believe that new epithelium could not arise from pre-existing epithelium, but only from connective tissue. This he had opposed, and in a paper on the subject showed that epithelial new growths do arise from epithelium. Again, when Dr. Creighton published his paper on sarcomas—i.e., connective-tissue growths—arising from epithelial tissues, he (Mr. Butlin) could not assent to this view any more than to the other. A third doctrine had now been advanced—viz., epithelial infection. He would be quite prepared to hear that any of the theories are correct, for nature works in many different ways in the formation of tissues—e.g., bone may arise from membrane or from cartilage, and it is quite possible that new epithelial cells may arise, as Dr. Creighton or as Mr. Cripps assert, or by the overflow of proliferating epithelium. It may be that one or other process takes place in different forms of cancer, provided only that it be accepted that a new formation of epithelium takes place from pre-existing epithelium and connective tissue from pre-existing connective tissue.—Dr. THIN understood that Dr. Creighton's view was that there was an accumulation of cells in the glands of the skin, some of which cells overflow into connective tissue, and then as waste products having epithelial qualities, infect the connective-tissue corpuscle, which becomes embryonic and develops epithelium. If so, it is a different thing to that opposed by Mr. Butlin, with whom he (Dr. Thin) coincided. Drawings like Dr. Creighton's occur in memoirs and books, only they are differently interpreted according to the views each has as to cell growth, and until some unanimity occurs on this essential point there will be no agreement on the interpretation. Mr. Butlin might show endogenous formation, which Dr. Thin would interpret as broken down cells infiltrated by leucocytes; and just as sure as Mr. Butlin is of his interpretation, so was he (Dr. Thin) of his. Theoretically his objection to Dr. Creighton lay in the use of the term "connective-tissue corpuscle," which had been variously applied, orginally by Virchow to interstitial spaces, by modern histologists to a thin epithelioid plate. In the skin one may not see a connective-tissue corpuscle owing to its delicacy; very often only nuclei are seen. In Dr. Creighton's preparations there was no evidence of connective-tissue corpuscles in the strict sense, for such cells probably perish as soon as the tissue cools. Dr. Thin would regard the nuclei, described as proliferating connective-tissue, as leucocytes which are undergoing an epithelial change from infection. This view is growing on the Continent and in America; in this country we lack authority. There was no histologist in this country who had seen a cell dividing.—

Dr. CRIPPS said that he had a third theory, different from Mr. Budin's and Dr. Thin's. Dr. Creighton described epithelial cells as lining acini, and outside the acini other cells, which become epithelial. In adenoid cancer of the rectum there occur outside the membrana propria masses of other cells having more of an epithelial form the further one recedes from the gland. The question is whether leucocytes become epithelium or arise from it. At the apex of each growing bud of adenoid cancer there are cells like leucocytes, and these lengthen and assume an epithelial type. Hence Mr. Cripps would infer that the leucocyte and epithelial cell are two types, the former the offspring of the latter. Further, he had specimens which show no distinction between leucocyte and nuclei of epithelial cells. He believed the leucocytes in submucous tissue to be the offspring of the nuclei of columnar epithelium, and that they go to form the retiform tissue. According to that view the white corpuscles of the blood are derived from columnar epithelium of the intestine. When, however, they reach a free surface or an organ they grow up, like the parent, into columnar cells. This explains the resemblance of secondary growths in the liver to the primary growth in the rectum.—Mr. PYE thought it almost a scientific misuse of imagination to hold that the nuclei of intestinal cells are the same as the cells forming the chief portion of the tissues of the body. Nuclei are of various kinds, and take on a variable amount of protoplasm. To suppose that because the nuclei of columnar epithelium cells in certain portions of the intestinal tract resemble connective-tissue cells underlying the mucous membrane, and that therefore the submucous cells are offspring of the epithelium, is rather a large draft on imagination. He could not think Mr. Cripps realised what such a supposition involved.—Dr. CREIGHTON, in reply, said that he had emphasised the fact that the products of secreting structures are not always fluid, but sometimes solid and cellular, and that these solid products sometimes accumulate in the submucous tissue; if that occurs in a catarrhal process, it is a doctrine not yet admitted. He then showed that two of the tumours described are largely made up of such accumulated products. It is an infiltration of epithelium in the literal sense; but that is not the sense in which the term is used in speaking of cancerous infiltration. The notion of epithelial cells developing from connective tissue, is one of the cardinal principles laid down by Virchow; it was opposed to embryological doctrines known to Virchow at the time he wrote his "Cellular Pathology;" and nothing more illustrates the sagacity and freedom from prejudice in Virchow than this doctrine. He (Dr. Creighton) wanted to show the connexion between disorder of glandular function and structure and invasion of connective tissue, so as to show why connective-tissue cells should so develop. This he regarded as due to spermatic action; the agency of these epithelial cells upon connective-tissue cells, causing them to assume the forms and grouping like that in the organ from which the infecting cells arise. Whenever epithelium is formed from connective tissue there is a departure from the normal; the idea that epithelium could be formed in more than one way normally is untenable, and was characterised by Waldeyer as "eclectic." Whether the cells beneath the gland were connective-tissue cells or not, they are not primarily epithelium, but become converted into epithelium. To a certain extent he agreed with Mr. Cripps, who had come to the conclusion that the cells below the rectal mucosa are derived from epithelium. The specimens in the dog are not of lymphoid cells, but epithelial, and they can be identified free from the ambiguities, as to identity, which lymphoid cells possess. In those specimens these subjacent cells are plainly derived from those within the gland, and the same may be true of the submucous cells observed by Mr. Cripps.

The Society then adjourned.

EPIDEMIOLOGICAL SOCIETY.

AT the meeting on Wednesday, Dec. 7th, 1881, Dr. George Buchanan, President, in the chair, Dr. T. SPENCER COBBOLD, F.R.S., read a paper by Dr. WYKEHAM MYERS, entitled "Observations on Filaria Sanguinis Hominis in South Formosa." In it the author gave full details of observations of patients under his care suffering from filarial disease and of experiments concerning the effect of different antiseptics and parasiticides on the worms, the results being in the main confirmatory of those of Manson in China. The periodic appearance and disappearance of the filarial embryos in the blood was especially dwelt upon, and the author was inclined to ascribe their disappearance to a solution and destruction of the parasites, rather than to their retirement into one of the internal organs and their resting there during the day. Experiments on monkeys made to drink water containing mosquitos which had previously ingested filariæ gave negative results.

Dr. COBBOLD next read a paper "On Filariæ and other Parasites in relation to Epidemics and Epizoötics." After referring to the labours of Manson, Lewis, Bancroft, and others, which were of great importance in their relation to the public health, he alluded to some researches of his own on the parasites infesting the elephant and ostrich, and stated that the facts set forth in his paper led to the conclusion that "flukes" were not the only entozoa capable of fatally victimising large and valuable animals. The paper by Dr. Myers was valuable as a confirmation, by an independent and competent observer, of the results obtained by Manson, first communicated by Dr. Cobbold to the Quekett Microscopical Club on Feb. 27th, 1880, and of the observations subsequently made by Dr. Stephen Mackenzie, and communicated to the Pathological Society during this year. In consequence of these results some of the scepticism expressed in relation to filarial questions had already disappeared, and sooner or later the important part played by these parasites in the production of disease would certainly be acknowledged. There was no longer any foundation for the continued incredulity of some observers here and abroad in reference to the question. The remarkable periodic appearance and disappearance of the parasites in the blood, and the adaptation of this cycle to the habits of the mosquito, could not be looked upon as a mere accident. In reference to Dr. Myers' hypothesis that there is a diurnal solution of the micro-filariæ that escape the clutches of the mosquito, Dr. Cobbold saw nothing impossible in the disintegration and absorption of the minute dead worms. On the other hand, he thought that such an absorption process could hardly overtake in a few hours the residual millions left by the mosquitos. He believed that the micro-filariæ, under ordinary circumstances, steadily increased in numbers when no insects interfered, and that their maximum numerical expression was in strict correlation with the reproductive vigour of the parent worm or worms, which might live for many years. The author next dealt with several prevalent misconceptions and misstatements respecting filariæ, referring not merely to matters of inference, but to questions of absolute fact. The statement, made by a writer in a recent number of one of the medical journals, that "the young filariæ develop in the mosquito into sexually mature worms," is incorrect. Throughout the whole range of helminthology nothing of the sort has been recorded; whether we deal with *cyclops* as the bearer of young guinea-worms, with *gammarus* as the host of a trout's echinorhynchus larva, with *melolontha* as the bearer of the hog's echinorhynchus, with *trichodectes* as the bearer of a canine tapeworm, and rats and mice of a feline one, or with molluscs as the hosts of cercariæ, the result is invariably the same. Sexual maturity cannot be arrived at prior to the passage of the parasite into the body of its ultimate host. After repudiating several of the incorrect statements wrongly ascribed to him, Dr. Cobbold next took up the question of the true mode of action of the filariæ and micro-parasites generally in the production of disease. If the victim or bearer of the parasites be regarded, as he ought to be, as the legitimate home or territory of certain parasitic inhabitants, it will be found that, in the case of minute entozoa, the injury to the territory is primarily due to overcrowding. In a subsidiary manner the injury is due to the activity or locomotion of the parasitic inhabitants. A few thousands, or even millions, of trichinæ may bore their way through the tissues without occasioning the slightest inconvenience to the human bearer. Many millions of trichinæ are necessary for the production of grave symptoms of trichinosis in man; consequently the presence of a few millions without the production of actual disease or suffering affords no proof whatever that the parasites lack the power of creating mischief. That which obtains in trichinosis, obtains also in the case of allied affections, such as filariasis, olulaninsis, strongylosis, cestode-tuberculosis, and so forth. Nearly forty years ago Gruby and Delafond found micro-filariæ in the blood of 5 per cent. of dogs examined by them, but they did not settle the question of the origin of the parasites. From 11,000 to

224,000 of them might exist without causing their host the slightest symptom of mischief. In 1867 the author expressed the opinion that these worms were the larvæ of spiroptera sanguinolenta, a view subsequently confirmed by Lewis and Manson. The latter found that the canine filariæ showed a periodic increase and diminution of numbers in the blood, but, unlike the human parasite, were never completely absent from the circulation. Dr. Cobbold could not share the surprise shown by Manson at the fact of the freedom of these verminous dogs from symptoms; had the parasites, instead of a few thousands, numbered many millions, he should have expected the canine territory to display some of the injurious effects of overcrowding. When the sexually mature, and very much larger, filariæ were present in the heart, it was easy to see that the immediate cause of pain, followed often by sudden death, was the obstruction to the circulation occasioned by the worms. In the same way in birds it requires a great number of the tapeworms normally present in the intestines to produce an epizoötic. When caused by smaller worms than cestodes, young and old birds alike succumb to any undue expression of the fauna. In a recent communication to the Linnæan Society Dr. Cobbold showed that the ostrich epidemic in South Africa was due to a parasite named Strongylus Douglassii, myriads of which occupying the proventriculus of young birds set up an irritation which sooner or later proved fatal. Dr. Cobbold next dealt with the assumption of the necessity of some pre-existent cachexia or constitutional weakness to account for diseases produced by worms. Cachexia, when produced, is the result of the loss of blood, gastro-enteric irritation or other disturbance set up by the parasites. In the case of plants certain morbid states may favour the invasion of parasitic fungi, but helminths attack the weakly and the healthy with perfect impartiality. The adult filaria sanguinis hominis is closely connected with the lymphatic system, and has actually been obtained by aspirating the lymphatic glands and dilated vessels. While far from thinking that *all* chylurias, chyloceles, and other phases of chylosis are exclusively due to parasites, Dr. Cobbold holds that all of these affections may directly arise from mechanical obstruction by filariæ to the flow of the contents of the lymphatic channels. Independently of Manson, Lewis and Bancroft in the East, Drs. F. dos Santos, Araujo, Magalhaes, Bourel-Roncière, and many others in Brazil have acknowledged the causal relation between filariæ and many cases of lymph scrotum, chylocele, lymph varices, and fistulæ, &c., and the English physicians in Bahia and Rio have not been behind their foreign *confrères* in throwing light on the subject.—In the discussion which followed the President, Dr. Vandyke Carter, Dr. Stephen Mackenzie and others took part.

CAMBRIDGE MEDICAL SOCIETY.

Atrophy of the Left Eye and Paralysis of the Fifth and Facial Nerves.—Treatment of Delirium Tremens.

AT the meeting on Dec. 2nd, 1881, Dr. Bacon, M.A., in the chair,

Mr. WHERRY showed a child, three years of age, with atrophy of the left eye and paralysis of the fifth and facial nerves on the same side. The cornea was opaque, and could be touched without any reflex movement of lid or eyeball. There was loss of sensation on the left side of the face, nose, supra-orbital region, and inside the mouth. The teeth on the left side were absent or decayed. The food collected in the left cheek. There was paralysis of the left orbicularis palpebrarum and facial muscles. On the left side the nasal mucous membrane was discharging, or covered with scale, the left auditory meatus usually blocked with secretion, and the membrana tympani dull. The ophthalmoscope revealed no disease in the sound eye. The perspiration induced by a Turkish bath at 150° did not differ in amount on the two sides of the face and forehead. The child is stated to have been quite well, and its eyes bright and clear, till it was seven months old, when it "had a cold in the eye," and did not seem to mind a towel rubbed across the eyeball. There was no history of syphilis. The child is in other respects healthy. Mr. Wherry considered all cases of paralysis of the fifth nerve of interest to ophthalmic surgeons, and that such were rare in children.—Dr. LATHAM thought the case one of special interest both physiologically and pathologically. He considered that the disease must be localised in a small spot about the course of the fifth nerve and anterior to the Gasserian ganglion. If the fifth nerve be divided anterior to the Gasserian ganglion, inflammation of the conjunctiva, ulceration of the cornea, discharge of the humours of the eye, with loss of smell on the paralysed side take place, but not if the nerve be divided at a point posterior to the ganglion, though that operation is followed by loss of sensibility on one side of the face, of the conjunctiva and the anterior portion of the tongue. Disease affecting the nerve, then, at a point anterior to the ganglion would explain many of the symptoms in the case under discussion, but not all; there was discharge from the child's left ear, and it was deaf on that side, symptoms independent of the fifth nerve. As, however, the ganglion rests upon the petrous portion of the temporal bone, disease of this bone at a spot anterior to it, and involving the branches of the nerves by pressure or otherwise, would account for all the symptoms. He regarded the case as a striking illustration of the antagonism between the sympathetic and cerebro-spinal nervous systems—a point to which several years ago he had directed attention in explaining some of the phenomena of sick-headache or megrim. The ulceration of the cornea, &c., was dependent upon excessive or uncontrolled action of the sympathetic on the vessels of the part modifying its nutrition; for if before dividing the fifth nerve anterior to the Gasserian ganglion the superior cervical ganglion is removed, no ulceration of the cornea takes place, and even after ulceration has taken place complete destruction of the eye can be prevented by removing the cervical ganglion; though this was hardly an operation to be recommended on a human subject.—Mr. WHERRY agreed with Dr. Latham's theory of localisation, and said that the fibres of the facial were involved as well as the three divisions of the fifth, which might be accounted for by disease of the petrous bone. The teething was also to be noticed, no signs of teeth appearing until the child was eighteen months old. The child was perfectly well until the usual period of first dentition.

Dr. LATHAM introduced the subject of the treatment of Delirium Tremens. He thought the subject offered scope for considerable difference of opinion, and was a suitable one for general discussion. He referred, first, to sleeplessness as a prominent symptom, and said that if sleep were obtained, recovery generally ensued quickly. Was the induction of sleep, then, a *sine qua non* in treatment? If sleep did not ensue, subarachnoid effusion and coma were likely to follow in some cases, while the majority might recover; but Dr. Latham thought the disease ought to be treated actively, and that dangerous remedies might be used with advantage to patients. He divided cases of delirium tremens into three classes: (1) Patients in moderate health who had used stimulants in excess; (2) those in robust health who had indulged after excitement or distress, chiefly young men; and (3) those broken down in health, and with damaged organs. The first class he thought could be treated with opium without risk, provided the urine was free from albumen; and he had been surprised to find albumen in the urine in a large proportion of cases without any other indications of kidney disease, and the albumen disappearing as the patient recovered. If albuminuria existed, the use of opium or morphia could only be pernicious. The first thing to do was to give soup, beef-tea, and alcohol in nearly the accustomed doses for twenty-four hours, and then opium; having previously given, if necessary, a dose of calomel. He advised the hypodermic injection of morphia, first in half-grain doses, and then in doses of one-quarter grain every half hour till sleep was procured, or the patient was distinctly under its influence, as shown by the condition of the pupil. He believed diminution in quantity of stimulants taken by the patient to be an early symptom, and not a cause of the disease. In the second class he advised not opium, but henbane. He had given bromide of potassium in forty-grain doses every four hours, and found the tincture of henbane in doses of one drachm every four hours succeeded better. He also thought that Merck's preparation of hyoscyamine would be useful, but had not yet given it a trial. In the third class he thought opium should be given with great caution, and that the free administration of stimulants was important, even as large doses as those customary with the patient. He mentioned a case in which a gentleman, who, in his eager desire for insensibility, had taken 240 grains of chloral and the same quantity of bromide of potassium at a dose, and survived after very free action of the skin, bowels, and kid-

neys. He deprecated the use of large doses of digitalis, as suggested by Dr. Jones, of Jersey.—Mr. T. HYDE HILLS, speaking from his experience as a gaol surgeon, thought leaving off stimulants was a cause of the disease, and that many prisoners became delirious after admission owing to this deprivation. He advised giving the usual amount of alcohol to which the prisoner had been accustomed, and thought chloral of benefit.—Mr. HODSON thought that the combination of chloral and capsicum was useful.—Dr. SMITH alluded to the usefulness of cold sponging of the body as a means of inducing sleep.—Dr. LATHAM, in reply, stated that he recognised the value of capsicum in confirmed cases; it was much esteemed in India. In young men he approved of Dr. Graves' plan of giving antimony and opium every two hours.

Reviews and Notices of Books.

Lectures on Diseases of the Chest, Throat, and Nasal Cavities. By E. FLETCHER INGALS, A.M., M.D., Lecturer on Diseases of the Chest and Physical Diagnosis, and on Laryngology at Rush Medical College, &c. pp. 437. London: Low, Marston, Searle, and Rivington. 1881.

IN a series of thirty-three lectures, Dr. Ingals has intended to "present us with a complete exposition of physical diagnosis, so far as it relates to diseases of the chest, throat, and nasal passages; the essential symptoms of each disease; the symptoms and signs of which are of most value in a differential diagnosis; and a brief outline of the proper treatment for the various affections. In addition to these, the anatomical characteristics and the causes have been pointed out whenever they are of special value in enabling the reader to understand the physical signs, or to properly apply remedial measures." If the author had called his work a manual or text-book of physical diagnosis, with a summary of such of the salient points of these diseases as a well-informed student would be expected to know, we should have very little reason to differ from his estimate of the work, but when such important maladies as lobar pneumonia and pericarditis only occupy about five pages each, it is obvious that such chapters ought not to be called complete expositions. We suppose that the author by a "complete exposition" of the diseases of the chest, &c., really means that a short account of every disease will be found, for this seems to us the most striking characteristic of the work. There is, however, but little guide to the student or practitioner as to which are the more important and serious affections; for even in the amount of space devoted to the three divisions of the work, as well as in describing individual diseases, the author has formed a mistaken estimate of their relative importance. The throat and nasal passages occupy 160 pages, which is almost exactly the number allotted to the lungs and pleuræ, whilst the heart and aorta are dismissed in half the number. Surely if the first necessitates so much space for adequate treatment, pulmonary and cardiac affections can only be very superficially dealt with in the pages devoted to their consideration. The chapters on Physical Diagnosis—namely, auscultation, percussion, the sphygmograph, and the laryngoscope—are much more comprehensive than those on the diagnosis and treatment, and may be studied with advantage, although there is little that is novel in them, except the descriptions and drawings of Camman's stethoscope and the author's emballometer for auscultatory percussion, a method of diagnosis rarely adopted on this side of the Atlantic, but for which the great advantage is claimed of more precision in determining the outlines of solid tumours and organs than can be established by the ordinary method of percussion. Camman's instrument requires a skilled assistant, but with the author's invention this is unnecessary. As Camman's method was instituted in 1840, it is remarkable that its use should still be limited to America, if it had been found to be of so great use as is suggested. The chapters on Diagnosis are very meagre, and wherever such a plan is practicable the chief differential features of the diseases are tabulated in parallel columns. These often present striking contrasts, to which accuracy seems to be sacrified in many cases, even when exceptional instances are left out of consideration. A student, in examining a doubtful case, would not derive much assistance from the following table (from page 218), whilst to anyone with the slightest experience of cardiac cases it is useless.

ENDOCARDITIS.	PERICARDITIS.
Rhythm of murmur.	
"Murmur synchronous with the first sound of the heart, and does not occur with the diastole, unless regurgitation takes place through the aortic or pulmonary valves.	Murmur not exactly synchronous with the valvular sounds, and often occurs both with the systole and diastole of the heart.
Seat of murmur.	
Murmur loudest at apex of heart.	Murmur heard loudest at border of sternum, near the fifth left costal cartilage."

The treatment recommended by the author is decidedly active, and often differs greatly from that which is generally adopted in this country. In acute pneumonia, for example, in addition to jacket poultices and general measures of support, we are advised to try a blister in the very early stages—namely, from ten to fifteen hours from the inception of the attack, to prevent its further development; and then in the first two or three days to give aconite or veratrum viride, with ergot in combination. After the second day quinine is to be used as an antipyretic, and after four or five days strychnia is to be added as well as digitalis if there be much prostration. We cannot help thinking that a lecture on the natural course and termination of the disease, and of the necessity of well feeding the patient, would be much more valuable. We must not conclude without mentioning the excellent manner in which the book has been printed and illustrated.

Inorganic Chemistry, Theoretical and Practical. By WILLIAM JAGO, F.C.S. London: Longmans and Co. 1881.
Chemical Notes and Equations for the Use of Students. By R. MILNE MURRAY, M.A., M.B. Edin. Second Edition. Edinburgh: Maclachlan and Stewart. London: Baillière and Co. 1881.

THE two small books whose titles are given above may appropriately be noticed together, since they cover more or less the same subject-matter. Mr. Jago's text-book is "designed primarily for students of science classes connected with the Science and Art Department," and no doubt the author will find it convenient for use in his own classes, where it is desired to impart just that amount of chemical information which students require to possess in order to pass a given examination and thus secure "good results" for the teacher. Beyond this extent the book will serve little useful purpose, because it meets no appreciable want. There is an over-production of such text-books, the tendency being for each science teacher to write his own book for his own classes, in face of the fact that there are many better, more systematic, and more exhaustive treatises previously available. We have no wish, however, to disparage Mr. Jago's text-book of inorganic chemistry, which, so far as it goes, is fairly well planned and carefully written; the matter, too, is trustworthy, and the laboratory hints contained in the volume will be found useful to readers.

We now turn to Mr. Murray's unpretentious little volume of "Chemical Notes and Equations, for the Use of Students." The first thirty-six pages are occupied with a general description of the principles underlying

chemical science, the sixty-five subsequent pages being devoted to the chemistry of the elements and their better known compounds. Chemical physics receive brief consideration at the end of the volume, although there seems to be no good reason why the subjects of specific gravity and the relation between the weights and the volumes of substances should not have been included in the outline of principles. The notes are very clearly written, and are perfectly intelligible to the student who may in the first place acquaint himself with the lucid description of the working theory of chemistry which the author presents to his readers. Mr. Murray's small book is so simple, accurate, and well-conceived in plan, that it forms an excellent stepping-stone to the more exhaustive study of inorganic chemistry, and as such it differs from most works professing a kindred object.

Sutton's Amateur's Guide in Horticulture, 1882.—Messrs. Sutton, the well-known seed merchants of Reading, have issued a quarto pamphlet with the above title, containing practical information on gardening matters. With a list of seeds are combined directions how to grow them. In addition to numerous wood engravings there are four beautifully coloured plates, illustrating respectively varieties of the primula, the aster, the begonia, and the petunia. There are also practical hints as to the best methods of destroying garden and fungus pests. The pamphlet is an elegant and useful guide for the amateur gardener.

A New Price-Current of Surgeons' Instruments and Appliances, and to accompany it a book of illustrations, which consists of nearly 450 quarto pages of woodcuts of instruments and apparatus, have been issued by Messrs. Maw, Son, and Thompson. The illustrations are good and the list of instruments complete, and the catalogue will be of great service to those ordering instruments of this firm.

No. 2 of the "Sunbeam Series," published by Messrs. Longmans, consists of an abridgment of the Rev. J. G. Wood's interesting volume, "Homes without Hands," and is entitled "Strange Dwellings." We have here sixty-four folio pages of well-printed letterpress, comprising the observations, presented in an easy and attractive style, of one of our best naturalists on the dwellings of animals, and illustrated with fifty-five excellent wood engravings, for the cost of sixpence. Truly a marvel of publishing enterprise.

New Inventions.

THE DAVIDSON OPEN MOUTH CATHETER.

WE have received some specimens of the special catheters made by the Davidson Rubber Company, Boston, U.S. The mouth or eye of the catheter is central at the end, and its edge is beautifully smooth. The instruments are made of

very flexible red rubber, which has an exquisitely polished surface; this form of rubber is stated to be very durable. The catheters are certainly the best of the kind we have ever seen, their extreme suppleness and smoothness and the terminal opening being important advantages.

Analytical Records.

WARNER'S QUINAMINE.

(NEWBERY & CO., NEWGATE-STREET.)

UNTIL chemists teach us to prepare quinine from coal-tar, or some other common substance, it is likely to remain expensive. But all the alkaloids of Peruvian bark possess more or less anti-periodic value, and it even sometimes happens that a preparation of bark is found more efficacious than quinine itself. Messrs. Warner now offer a preparation at about one-third the price of quinine, which may safely be tried as a substitute for the more expensive drug. It does not pretend to be better than quinine, but only to be a fairly efficient substitute for it. Amongst the poor, to whom quinine is sometimes almost as unattainable as good port, the new preparation may prove a great blessing.

VICTORIAN WINES.

(S. T. REEVES & CO., 4, HOWARD-STREET, STRAND.)

For many years wine has been made in South Australia, the importation of which into this country has gradually increased as the manufacture improved. We have now, for the first time as far as we know, wines of various kinds from Victoria. The samples submitted to us are labeled as Australian Burgundy, Hock, Sauterne, and Tokay. We have examined them with much interest, and are glad to be able, on the whole, to speak well of them. The Burgundy seems to us the best, although the Hock and Sauterne are also good. All appear to be unfortified and unsweetened, and all are remarkably generous and rich in the non-alcoholic constituents of wine. The Burgundy would be a fine wine for a convalescent. It is evident that the wines are made with skill and care, and, although the subtle bouquet of the best European wine has not yet been attained, we think them well worthy of success in the English market. They certainly point to a brilliant future for the wine-producing districts of Australia.

NUTRIMENTIN, OR CONDENSED FARINATED BEEF (PULVIS CARNIS BOVIS).

(H. & T. KIRBY, NEWMAN-STREET, OXFORD-STREET.)

This new preparation is described, and in our opinion described correctly, as "consisting entirely of fresh meat, whole wheat, oatmeal, and other farinas, prepared by Dr. Kirby's process of condensing and preserving fresh meat." It is sold in flakes and powder, is uncooked and unflavoured. It is therefore an extremely concentrated flesh-forming food, a kind of solid "stock," capable of being made up in a great variety of ways, as the directions for use sufficiently show. Real beef-tea, thick or clear soup, beef panada and beef porridge, are some of the recipes given, and others will occur to every skilful cook. So convenient and compact a food can hardly fail to be extensively used.

IODINE SOAP (IODUM CUM SAPONE).

(JAMES LEWIS, OLD BOND-STREET.)

The iodine in this soap is easily recognised by the ordinary tests. Of course it exists in the soap in the form of iodide, probably as iodide of potassium. The soap is of excellent quality and pleasant to the skin. It seems well adapted for general use, and will probably be valuable in certain cases.

ZEA, THE UNIVERSAL FOOD, PREPARED IN SWITZERLAND.

(R. LEHMANN & CO., FENCHURCH-STREET.)

Several varieties of this food are sold, the sample before us representing what is called "the mother's brand." It is well prepared, highly nutritious, and pleasant in flavour.

THE LANCET.

LONDON: SATURDAY, JANUARY 14, 1882.

THE complete Transactions of the recent session of the International Medical Congress are now before the profession, and a better opportunity than has been possible hitherto is afforded of judging of the amount and value of the work done during that busy week in August. Already we have on several occasions spoken in terms of high praise of the excellent manner in which the business arrangements of the Congress have been carried out; but the publication of the Transactions so soon after the meeting puts all the other achievements of the Executive into the shade. The Transactions of the previous meeting held in August, 1879, have only just been issued, although not consisting of anything approaching the same amount of material. The four volumes before us consist of no less than 2548 royal octavo pages of closely printed matter, the papers being in either English, French, or German. We are not aware that ever before has so large a body of "Transactions" been published in so short a time. The labour of seeing the volumes through the press can only be estimated by those who have had to share in or undertake similar work, and Sir WILLIAM MAC CORMAC, Mr. MAKINS, the Secretaries of the Sections, and the publisher, are alike to be congratulated on their enterprise and success.

As we pointed out some months ago, the speedy issue of the Transactions was the one thing necessary to make this meeting of the Congress a *complete* success. This has now been secured by an issue far earlier than the most sanguine could have anticipated; and this is a matter of the utmost consequence, for with the number of scientific journals and the many means of intercommunication, to say nothing of the rapid progress of science, papers and speeches one or two years old are in danger of being out of date. The meeting in August was the grandest medical Conference ever held, and the more we look into these four volumes the more we are impressed with the amount and value of the work done. But each member could hear but a small portion of the whole, and is dependent upon reading the Transactions for very much that he would gladly, if possible, have learnt by word of mouth. The papers and speeches have all appeared while their interest is still fresh, and so quickly that in these volumes we have the record of the latest opinions on all medico-scientific questions, and the register of the present position of our knowledge and practice.

As will be remembered, the work of the Congress consisted of general addresses by Sir JAMES PAGET, VIRCHOW, RAYNAUD, BILLINGS, VOLKMANN, PASTEUR, and HUXLEY; with papers and discussions conducted in sixteen sections, embracing all departments of medical practice and study. In each section a very large range of subjects was dealt with, so that it would be difficult to find any question of special interest to the profession, either in its scientific or practical bearing, that was not more or less thoroughly considered by those most able to throw light upon it, and which is not therefore dealt with in the volumes before us.

The masterly general addresses must be still fresh in the memory of all who heard or read them, and will be by them greatly valued in this collective form. Of the other matters we cannot here speak in detail. In Anatomy important questions of homology, development, intimate structure, variation, and the best aids to teaching were discussed. In Physiology such questions as the function of the cortex of the brain, the nervous mechanism of the heart, animal heat, glycogen, and various histological problems, with instrumental aids in the study of physiology and histology, were debated. The pathologists busied themselves with tubercle, disease organisms, renal disease in all its forms, locomotor ataxy, and the origin of malignant tumours. Many new remedies, and new uses of old ones, were described and discussed by those most interested in materia medica and therapeutics. In the section of Medicine, epilepsy, locomotor ataxy, gout, rheumatism, Addison's disease, Bright's disease, phthisis and the physical examination of the chest, were the special subjects treated. In Surgery the latest advances in the treatment of aneurism, of intra-peritoneal tumours, of calculus in, or disease of, the kidney, of stone in the bladder, of destructive disease of joints, and of wounds—all questions of primary importance and unfailing interest—were discussed in an authoritative and practical manner. In the section of Military Medicine and Surgery such points as the treatment of gunshot wounds of large vessels, the value of the antiseptic method in military surgery, the transport of the wounded, typhoid fever, sunstroke, the Contagious Diseases Act, and the effects of modern bullets, were specially considered and debated; and as recent years have afforded only too abundant opportunity for gathering experience on these points, much of value was elicited from the various surgeons who took part in the discussions. And so on through all the other sections; we might go on enumerating the chief features of interest in the other volumes — glaucoma, laryngeal phthisis, intra-laryngeal operations, replantation of teeth, uterine forceps, rickets, and infantile syphilis.

It is a matter of legitimate pride that the Transactions of the Congress are such a record of work, such a record of advance all along the line. A comparison of the state of knowledge revealed by these volumes with the contents of, say, the best text-books of but ten years ago, will convince the most incredulous sceptic of the enormous advance our science and art are making. And when we remember that these volumes will be sent all over the world to over three thousand medical practitioners, and will be received with far more than ordinary interest, it is impossible to measure the general gain, not only or chiefly to the profession, that must result.

THE authority with which M. MALASSEZ speaks upon all subjects connected with the constitution of the blood confers importance on a summary of facts relating to the formation of red blood-corpuscles in bone marrow, which he has recently communicated to the Société de Biologie. This summary contains an account of the results attained in a series of investigations on the subject, and embody facts and

theories of undeniable importance. It is generally admitted, since the discoveries of NEUMANN and BIZZOZERO, that the red cells discovered by the former in the bone marrow of the mammalia are embryonal corpuscles, but various opinions are held regarding the origin of these cells and the mode in which they are transformed into red blood discs. It is to these two points that his investigations have been especially directed. The first hypothesis which was advanced—and it is still accepted by many authorities—is that the red cells are transformed into corpuscles by the gradual disappearance of their nuclei. If the process is studied in animals in which the red corpuscles are nearly the same size as these cells, forms of the latter may be observed in which the nuclei appear to be in process of disappearance. But if methods are employed which leave the structure of the cells unaffected, and especially if the examination is made in animals in which the red blood discs are considerably smaller than these cells, such intermediate forms cannot, according to MALASSEZ, be discovered. Moreover, the corpuscle is so much smaller than the cell that a transformation of one into the other would imply either a contraction of the protoplasm of the cell, or a change by which this breaks up and forms more than one globule, and each assumption is destitute of evidence. Hence the conclusion is drawn that this theory of transformation by destruction of the nucleus is untenable. RINDFLEISCH, from appearances which he observed in some cells, concluded that the change does not consist in a destruction of the nucleus, but in the exit of this from the cell. This appearance is stated by OBRASTZOW to be due to an alteration of the cells analogous to that which DONNÉ long ago noted in the corpuscles of the frog treated by water. It is probably an artificial phenomenon, for it cannot be observed in recent or well-preserved specimens.

In studying the formation of blood-corpuscles in the spleen, MALASSEZ and PICARD observed cells, charged with hæmoglobin, which presented protoplasmic buds having the aspect of red corpuscles, but spherical in shape, and it was suggested that these, being detached, might become separate blood discs. MALASSEZ has succeeded in finding a similar appearance in preparations of bone marrow, which were made in such a manner as to preserve undisturbed the form and structure of the tissue elements. A fragment of fresh marrow was teased out on the object-bearer without the addition of any reagent. Sometimes the glass slide was merely touched with a fragment of marrow. The preparation was then exposed to the vapour of osmic acid. The tissue elements being thus fixed, they were coloured with picrocarmine, or with eosin and logwood. In the hare the hæmoglobic cells are very large in proportion to the red corpuscles, and they may present several minute buds. In the rabbit, calf, cat, and child the cells are smaller, and usually the bud is single. The most developed prominences tend to become constricted and pedunculated, and thus to assume the appearance of spherical corpuscles. Their substance possesses the same homogeneity, the same refractive power, the same colour, and presents the same histo-chemical reactions as do the red blood-corpuscles. The only difference is in their shape. But the normal globules, which are biconcave, may under certain conditions of humidity, &c., swell up, become concavo-convex, and, finally, biconvex and spherical. It does not seem inconceivable, therefore, that these buds, becoming detached, may undergo the converse transformation; and the difference in shape does not constitute adequate ground for the rejection of a theory which can plead in its favour a high degree of intrinsic probability.

Regarding the origin of the red cells of the marrow, certain facts appear to be well established. They may be seen in every stage of nuclear division, and it is therefore generally admitted that they are capable of fissiparous multiplication. But their primary origin is still involved in considerable obscurity. The earliest theory, which is still extensively held, is that they are derived from white blood-corpuscles. But the blood contains several varieties of leucocytes. MALASSEZ believes that we must reject the idea that they come from ordinary leucocytes, with a finely granular protoplasm, and which appear polynucleated when they are treated with osmic acid; and also the view that they are formed from the white corpuscles which stain with eosin, because these elements are completely different from the red cells, and in properly prepared specimens no intermediate forms can be discovered. The origin of these cells from the hyaline leucocytes is much more probable, but is destitute of evidence. Preparations made in the above-described method show, however, a perfect series of cell-forms, at one extremity of which is the red cell, and at the other is an element of very different aspect. The forms which resemble the red cell are clearly more differentiated and specialised than the others, and they may therefore be regarded as more advanced in development. All the forms may be referred to three principal types. Those which are nearest to the hæmoglobic cell differ in their more hyaline protoplasm and smaller amount of hæmoglobin in the reticulated form of their nuclei, and in its slighter affinity for colouring reagents. Another form, farther removed from the hæmoglobic cell, possesses a less abundant protoplasm, still less coloured and finely granular, a nucleus relatively large, more granular, and tinting still less than those of the last group. In the third form the nucleus occupies the whole, or almost the whole of the cell, as if its substance were diffused through the protoplasm. From the serial character of these forms, MALASSEZ concludes that they, and not the leucocytes of the blood, are the origin of the medullary hæmoglobic cells. The entire succession of forms may be regarded as a progressive development, resulting in the formation of an element which possesses in high degree a special function, that of respiration.

In the animals which possess nucleated red corpuscles the process of formation of these appears to resemble perfectly that of the hæmoglobic cells in animals which possess only non-nucleated blood discs. The cells of origin are the same (and were partially recognised by BIZZOZERO and TORRE), and they present the same transformations, nuclear and protoplasmic. The process does not, however, advance beyond the formation of the red cell. This does not bud, does not form globules; it becomes flattened and passes into the circulation, constituting itself the red corpuscle. Thus the nucleated and non-nucleated red corpuscles are not elements of identical nature, although belonging to the same family and fulfilling the same purpose.

Fuller details of these important researches are to appear in the next number of the *Archives de Physiologie*. The

assertions of MALASSEZ will, no doubt, meet with criticism; but he is to be congratulated on having furnished an explanation of the process of blood-formation far clearer than any which has yet appeared.

WHEN we opened our columns to the discussion of the question of the position of Ship Surgeons, we felt pretty sure that we should have strong expressions of opinions completely antagonistic to each other, and we have been justified by the result. In the correspondence which we have published, the mercantile marine service has been represented, on the one hand, as being intolerable, the surgeon being "badly paid, badly treated, badly accommodated, and his usefulness as a sanitary officer completely paralysed by the undefined nature of his responsibilities and the want of all authority"; while, on the other, we are assured by gentlemen who have had considerable experience in it that they have rarely, if ever, had any difficulty with reference to their position, or been subjected to those snubs or petty insults and annoyances of which some complain. We are disposed to agree to a great extent with Mr. O'CALLAGHAN that "a man makes or mars his own reputation, and will not lose it without a sufficient cause." There are, no doubt, instances, though we believe them to be rare, of men rising to the command of a ship who are constitutionally unfitted for it, who cannot bear to have any complaints made or any suggestions for improvement offered as regards anything under their control, and who seem to take a delight in making everyone under them feel his dependence on and subordination to them. But even with such men, good temper, invariable courtesy, steady attention to duty, and avoidance of interference or advice in matters out of the medical officer's sphere of duty have a wonderful effect in making things work smoothly and avoiding unpleasant collision. We are far from saying that the service is all that it ought to be, or that there is not great room for improvement, but we do not think that it is nearly so bad as represented by some of our correspondents, or as to lead us to advise our younger medical brethren to avoid it. One of the recommendations made by those who are not content with the service is that the surgeon should be "a Government official independent of captain and owners," but such an appointment would be utterly incompatible with discipline, and would lead most probably to very unpleasant results. It appears to us that there are three very distinct classes of ships in which a surgeon may be employed:—1. Those which having a large crew carry a surgeon for their sake, his work being to endeavour by watchful care to keep them in health, and when they fall sick to restore them to the duty roll as quickly as possible. 2. Large passenger ships in which the surgeon, in addition to the care of the crew, has to attend any of the passengers who may be, or become, ill. 3. Emigrant ships which carry large numbers of the working classes to our colonies or to America, many of them aided by grants to assist in defraying the expense of their passage. In the first class the owners have a direct and strong interest in securing the services of an efficient medical officer; in the second class they have also a strong inducement to maintain the reputation of their ships in these days of active competition, and the passengers for the most part may be trusted to take care of their own interests in this respect. In the third class the Government so far interferes as to see that a legally qualified medical man is carried. In all three there is of course a great deal left to the discretion of the shipowners in the selection of the individual; and we fear that they are not always alive to the importance of a good choice, or above the temptation to save money at the expense of efficiency. But, in the large passenger ships especially, this is greatly counteracted by self-interest—by the loss of reputation, and consequently of money, which would, slowly perhaps but surely, follow such a course. We do not see how matters could be improved by legislative interference, nor could we advocate any action on the part of the Government beyond a careful supervision that no person should be allowed to be shipped as a surgeon unless duly qualified under the Medical Registration Act. We would, however, call the attention of shipowners to the importance, in their own interests, of securing really efficient medical officers. And to promote this object we would suggest the propriety of careful selection of the surgeons; a clear definition of their duties, and especially as sanitary officers on board; a larger amount of power to carry out sanitary measures, subject of course to the control of the captain, but with a knowledge on his part that the manner in which this control is exercised will be carefully inquired into by the owners; a system of increased pay with length of service, to induce good officers to remain longer in the service than at present; a greater freedom from restriction when the ship is in port; and attention to providing a suitable cabin on board, where they may carry on their professional duties and studies free from those harassing interruptions which are apt to occur, especially in large passenger ships. By such a course they will be more likely to secure the services of well-educated gentlemen and get rid of those who, to use the words of Dr. RICH, "forfeit the esteem of officers, passengers, and company by gambling, drinking, and bad behaviour generally." We trust this description applies to very few, but the sooner they are removed from the service the better for the owners and for the profession. To the young medical man who desires to see a little of the world before he settles down to practice, we do not consider this at all a bad opening, but we would impress upon him the importance of cultivating habits of discipline, kindness, cheerfulness, and zeal, of carefully avoiding anything that would bring discredit upon him or his profession, and of taking advantage of every opportunity to keep up and increase his professional and scientific knowledge.

IN both men and animals dying from acute infectious diseases colonies of micrococci have frequently been found in the bloodvessels, occupying the cavity for longer or shorter tracts. The origin and mode of development of these collections have been the subject of special study in the Strassburg Pathological Institute by WASSILIEFF of St. Petersburg. The observations were made on frogs, since Von RECKLINGHAUSEN has found that in them the micrococci develop in the bloodvessels with great rapidity, and they present greater facilities for the study than do higher animals. If ulcerative processes are produced, as by the inoculation of pus, and other animals are successfully infected with the secretion, a form of septic infectious disease

is gradually produced, acute and usually fatal, accompanied shortly before death with numerous bacteria in the blood, and with the occurrence of extravasation in various tissues. In the bodies of these frogs a development of micro-organisms, bacteria and micrococci, commences immediately after death, chiefly in the vessels, and reaches the greatest degree of intensity in the skin. In the latter all the vessels are plugged with colonies of micrococci at the end of twenty-four hours, as if the whole tissue had been injected with micrococcal material; their development is favoured by warmth, moisture, and the presence of air. If the blood, or fragments of the tissues, of such septic frogs are injected into the lymph-sac of other frogs, the same disease is produced with similar appearances during life and after death. If such a septic frog is killed before the bacteria are visible in the skin, these may be entirely absent after death, or may be found only in circumscribed regions. In the bodies of frogs which have not died from septicæmia no trace of such micrococcal development is to be discovered in the cutaneous vessels, always providing there has been no loss of substance during life. The latter, if attended with ulceration, may be followed by the post-mortem appearance of micrococci in the vessels of the skin near the ulcers, and also at a distance, and the organisms developed are not to be distinguished from those of septic frogs, the only differences being in the intensity and extent of the development. It is very remarkable that, during life or immediately after death, no sign of these micrococcal colonies can be discovered in the vessels of the septic frog, even in the immediate vicinity of recent extravasations. Hence we cannot refer these extravasations to micrococcal obstruction, as some writers have assumed. They appear to be produced by the arrest of the blood current by spherical hyaline masses (which are constantly to be found in the blood of septic frogs), and in some cases by pigment masses. The individual micro-organisms are either free in the blood or else embedded in white blood-corpuscles. Under certain conditions, however, micrococcal colonies may be observed to develop during life, and this not only in septic but also in healthy animals. The intra-vital development occurs only when the circulation is arrested in a certain region. The effects are produced best by dipping one hind leg, for a few seconds, in water at 50° C. until tetanic contraction occurs in the muscles of the limb. After one or two days micrococcal colonies are found to have developed in the vessels and in the cutaneous glands, accompanied by signs of moist gangrene. The same result sometimes follows arrest of the circulation by ligature of the femoral artery.

These observations have a most important application to the pathology of the higher animals, including that of man. It has been hitherto assumed, in the numerous cases in which micrococcal plugs are found in the vessels, that they were developed during life, and, according to modern pathology, they play a most important part in the production of symptoms and in the causation of other morbid processes. If the facts ascertained with regard to the frog are to be accepted as true also of man (and we can see no *à priori* reasons why they should not be), many of the current conclusions will have to be revised and possibly modified. If bacterial plugs in the vessels are sometimes formed during life, but much more frequently after death, a task of no small difficulty—that of distinguishing the *ante-* and *post-*mortem origin of such obstruction—is added to those of advanced pathology. The task is the more difficult since the criterion usually relied upon in similar cases—that of the evidence of vascular obstruction during life—is no longer valid, since this, usually regarded as the effect of these micrococcal plugs, may be in reality their cause.

These observations have another important bearing on human pathology. Putrefaction seems to arrest the growth of many morbific organisms, which cannot thrive and even die under the conditions in which the bacteria associated with putrefaction flourish. But it would appear that the interval between death and putrefaction is attended with conditions which are extremely favourable to the development of at least some organisms of high pathogenic virulence. The fact of the intensity of many septic poisons shortly after death—notably, for instance, that of puerperal fever—is well known, and it is probable that this post-mortem virulence is due not only to the persistence of the poison produced during life, but to its positive augmentation, by organic growth, in the still and slowly changing blood.

Annotations.

"Ne quid nimis."

THE UNIVERSITY OF LONDON.

THE meeting of Convocation takes place on Tuesday next, the 17th inst., and not the 10th, as was inadvertently stated last week. Since we then wrote the name of Professor Carey Foster has been added to the list of candidates for nomination to the Senate, but it may be presumed that his candidature is put forward by his friends in view of a subsequent election. The nomination list for Mr. Newth is signed by 481 graduates, for Dr. Buchanan by 404, for Dr. Barnes by 168, and for Professor Foster by 11. Each graduate is entitled to vote for three of these gentlemen, whose names will be returned to the Crown, and the numbers given above do not, of course, represent the actual support which will be given to any of the candidates. If Mr. Newth's supporters, however, press his claims, and the medical vote is divided (as seems likely), we should not be surprised to find that gentleman highest in the poll. Should this be so, it will be in violation of the custom which has grown into a precedent, that the selection of a Senator should be made in turn from amongst the two great classes of graduates. Such an event would be deprecated on all sides, for it would tend to make a breach between the faculties, and lead to a discreditable struggle on every successive occasion that Convocation is called upon to exercise its privilege. There is reason to believe, however, that many of Mr. Newth's supporters will also give a vote to one of the medical candidates. The agenda-sheet for the meeting is unusually crowded for the January session, the first business being the adjourned debate on Mr. Hensman's motion to admit female graduates to Convocation and the franchise (so far as the election of a member for the University is concerned). To this an amendment has been moved by Mr. MacDowall to admit them to Convocation only. The other subjects to be brought under the notice of Convocation include the recommendation to the Senate to institute a Board of Studies to form a medium of communication between the Senate, the examiners, and the teachers of candidates for degrees; the mode of nomination of members of the Senate; the establishment of local examinations; and the institution of honorary fellowships.

ACCIDENTAL POISONING AT GUY'S HOSPITAL.

A POOR woman has been poisoned by "misadventure" at Guy's Hospital. A powder of hydrochloride of morphia was, it seems, sent into the ward in the same sort of wrapper as that used for some quinine powders which the deceased was taking, and a nurse gave the patient the wrong powder, and she died. A lay contemporary, commenting on the occurrence, observes: "Life has been needlessly sacrified owing to gross neglect on the part of those entrusted with the care of the patients in Guy's Hospital. It is absurd to talk of the system being at fault. There was nothing deserving the name of system in the dispensing and custody of the medicines used." Unhappily, this view of the case, and of the system, or rather the utter want of system, which the "misadventure" illustrates, will be taken by all who are influenced by feeling or prejudice. If there be any one place where accidental poisoning should *not* occur, it is a hospital. The organisation of our hospital system is wrong. The division of authority which lay committees insist on establishing and maintaining at all costs, *must* lead to laxity of discipline. The notion of a resident medical superintendent being under the governors of a hospital and responsible to them is fatal. The medical staff of every hospital must be supreme in the whole care and cure of the sick, or there can be no true order and no practical safety. The attendants, whether superior or subordinate, or "sisters"—as in our *quasi*-religious system they are foolishly called—or "nurses," ought to be under the direct control of the medical officers. In short, a hospital is a *medical* institution, and public opinion should insist that it should be managed as such. It was once the duty of the resident medical superintendent, or "apothecary," as he was then appropriately designated, to see that the patients were properly looked after both as regards feeding, nursing, and the administration of medicine. He or his assistants knew every case in its medical or surgical aspects, and, in the absence of the honorary physicians and surgeons, the patients were under the personal care and responsibility of this fully qualified staff of paid officers, who visited the wards *frequently* in the course of the day, and were always at call. We cannot regard the changes which have been effected in hospital management generally during the last quarter of a century as improvements. With tares we have rooted up the wheat. Direct medical control has been sacrificed—in practice if not in principle. The authority by which a hospital should be managed has been broken up. Rules and regulations are no longer of any great moment, because there is really no one among the crowd of officials—with high-sounding and sentimental titles—who is personally responsible for their being carried out. If an "accident" occurs, the blame falls in flakes on the shoulders of many, and no one in particular feels hurt.

THE MECHANICS OF MUSCLE.

M. MENDELSSOHN, to whose investigation on the subject of muscular tone we lately referred, has continued his study of the physiology of muscular contraction, and has published some further observations on its mechanical phenomena. The first point investigated was the "height of traction"—i.e., the degree of elevation of a weight on a given stimulation. It was found to vary in different states of the muscle, and to be closely related to the amount of "load," and to the intensity of the stimulus. It lessens the greater is the weight with which the muscle is charged, until it disappears altogether. But this diminution does not commence with the first gradual augmentation of the load. With a very slight weight the first increase is attended with an increase instead of a diminution in the degree of movement; and it is only when the weight is increased still further that the progressive diminution commences. The initial increase is the more evident the smaller the difference and the shorter the interval between the successive charges. The degree of traction increases with the intensity of the stimulus up to a definite point. When a certain maximum is reached, there is no augmentation with a further increase in the intensity of the excitation. During the progressive decrease in the strength of the electric stimulation there is a corresponding diminution in the degree of elevation; but the traction at each strength of current is less than for the corresponding strength of an increasing current. This fact is no doubt due to the influence of fatigue, an influence which was also demonstrated, by separate experiments, to lessen the height of traction. An arrest of the circulation was found in the first instance to increase the height of traction, but afterwards to diminish it. The elevation of temperature of the muscle also at first causes an increase up to the temperature of 24° and 30° Centigrade. Above this the height of traction lessens until it ceases altogether. Another point investigated was the muscular extensibility. This increases with an increasing charge, but the increase is much more striking with a small than with a considerable augmentation of load. The extensibility is rendered greater also by fatigue, by arrest of circulation, and by section of the nerve. It is increased, too, by the state of tetanus, even when due allowance is made for the shortening of the tetanic state. If a given weight is attached to a muscle, the maximum of extension is not immediately reached, but continues for a short time to increase. This deferred extension is termed the supplementary extensibility. It also increases with the load, but only in the case of very slight charges. If considerable weights are attached, the increase is followed by a diminution in the supplementary extensibility. These variations are in no way related to those in the initial elongation produced. The extension may be twice as great as the initial elongation, and may continue for from five to ten minutes. It is lessened by the same influences as lessen the initial elasticity. Muscular contraction is considerably influenced by it; the curve produced by a single contraction in this state does not descend to the abscissa; the muscle appears to maintain a given degree of contraction. Lastly, it has been ascertained that the muscular elasticity is extremely feeble. After elongation the muscle does not return to its original length unless the "load" was extremely slight. The persistent extension is in direct proportion to the amount of the charge and the length of its application.

THE PAYING WARDS OF ST. THOMAS'S HOSPITAL.

OUR readers will be interested in receiving a further report in reference to the paying wards of St. Thomas's Hospital. Whatever may be thought of the appropriation of any part of an endowed hospital to those who can afford to pay eight shillings a day for accommodation and treatment, in this case the course seemed justifiable, if not imperative. Be this as it may, the experiment is an interesting one, and the more it succeeds the more will the indebtedness of the hospital be reduced and the sooner will the managers be enabled to restore the hospital to its original uses as a charitable institution. The first nine months of the working of the paying patient scheme in St. Thomas's Home has been satisfactory enough to justify the governors in continuing the undertaking. The number of patients under care has risen from eleven in March to thirty-five, and for some days forty, in November, the average daily number for the whole time being twenty-two. The result is a profit in actual receipts and expenditure proper of more than £400, which would have been increased to nearly £560 if the salary of the resident medical officer had been only paid for nine

months instead of for more than twelve, he having been appointed upwards of three months before the home was opened. The preliminary expenses of fitting up the wards have not been taken into account, but as they will be thrown over several years the profit will not be materially lessened. The home has also the advantage of being free of rent and parochial rates. The total number of beds at present available under the authority of the Charity Commissioners is forty-one, of which the larger portion are appropriated to males. The resident medical officer states in his report that the home has been of especial value to those who have not homes of their own in which they could be efficiently nursed and cared for during sickness, such as clerks living in lodgings, visitors to London, colonists, and travellers who have been taken ill in England, or who have returned to their country on account of ill health; eight of the patients have been medical men. Most of the patients in the home have expressed their approval, not only of their treatment and nursing, but of the arrangements made for their accommodation.

THE SPHYGMOGRAPH IN PRIVATE PRACTICE.

NOW that we have instruments capable of taking pulse-tracings almost as readily and quickly as the pulsations of the radial artery can be felt by the finger, it is very desirable that the sphygmograph should be generally applied to those uses in which it is likely to be effective. Like everything else, sphygmography has been in turn recklessly extolled and unduly depreciated. It is time that its real value to the practitioner in his daily diagnoses of disease should be clearly pointed out. Briefly the facts are these. The height of the upstroke made by the needle depends on conditions and methods of applying the instrument which deprive it of any significance, but its direction, whether oblique or vertical, in relation to the rapidity of the movement of the paper, is of great suggestive moment. If the contraction of the left ventricle be free and the distribution of blood through the arterial system be unimpeded, the up-stroke will rise nearly at a right angle to the base line of the paper. If the impulse communicated to the blood-current by the heart be weak, or the vessels be rigid, so that they dilate slowly, the up-strokes will be oblique. Again, if the vessels be in a normal state and free, the down-stroke will commence with a sharp recoil at the instant of the subsidence or expiry of the force of the heart's action, as shown by the up-stroke. The juncture of the up-stroke and the down-stroke will therefore be acute. The rapidity of the fall shows the state of the vessels, as regards their rigidity. The contraction of the vessel, which is a reaction upon the dilatation effected by the impulse communicated to the blood-current by the heart, produces a second rise, generally half-way along the down-stroke. This rise, which marks the arterial element of the pulse phenomenon, bears a relation to the up-stroke which is not affected by the mode of applying the instrument, and it is therefore of great value. The chief points of practical value which the sphygmograph shows may therefore be enumerated as follows. The force and freedom of the ventricular impulse in relation to the state of the arteries; the condition of the coats of the arteries in relation to the question of their rigidity or elasticity; the condition of the muscular coats of the arteries as indicated by the power of contraction possessed by the vessels and their excitability, as evidenced by the quickness and extent of their contraction as a reaction on the impression produced by the heart's action. This contraction is a true reflex acting through, and in, the vaso-motor system. The question of blood-tension is also, as it were, raised, and partially—though not fully—discussed by the behaviour of the needle of the sphygmograph. Enough, therefore, may clearly be learned by the use of this instrument to render it of high practical value even to the busy practitioner, and it is of interest to the progress of our art that it should be generally employed. The discredit into which it has fallen has resulted from the not unnatural enthusiasm of its introducers, who made too much of it, and exaggerated the importance, while they misconstrued the nature, of the lessons it has to teach, and the aid which, when rightly used, it can render.

THE CASE OF THE FARMER BROOKS.

WE are indebted to Dr. F. W. Warrington, of Congleton, for the courtesy of a communication embodying a very interesting account of the medical aspects of the case of the man Brooks, whose confession has recently excited so much attention. It seems from the surgical details of the case, of which we give a summary in another column, that the injury inflicted was of a very simple nature, and evidently effected by some person familiar with the operation of castration as performed on cattle. At first Brooks declared that he could not recognise the men who, as he alleged, committed the assault on his person in December, 1879. His identifying the prisoners was an afterthought. Later in the case, he stated that he should have kept the matter quiet "had not the police bothered him so much." The most remarkable feature, however, in in the case is the fact that in February, 1881, the man professed to have had another attack made upon him of precisely the same nature. On this occasion the injury inflicted was, as far as could be gathered by the surgeon who was called in to see him (Dr. Warrington), very similar to that sustained primarily. This time Brooks stated that four men had attacked him! There cannot be the slightest doubt in the mind of anyone reading Dr. Warrington's statement that the case was throughout one of self-mutilation from insanity. The only marvel must be that when the act was repeated the Home Secretary was not at once informed and the unjustly convicted men liberated. Looked at from the medical standpoint, the case was certainly never clearly before the Court. As Dr. Warrington points out, "no questions were asked," on the part of the defence, "as to the man's habits"! These were in themselves suggestive, Brooks being "of eccentric habits, close, and reserved." Altogether the story would seem to have been one of the most equivocal character throughout, and this may be taken as a typical and striking example of a class of cases which must always be liable to misconception, to the lasting discredit of justice, so long as lawyers think they can appraise the real value of medical evidence, and there is no medical tribunal to which to appeal in matters of doubt.

THE NEW YORK SMALL-POX HOSPITAL.

NEW YORK is dreading with the coming winter to witness an irruption of small-pox in the city such as it has been free from for several years. The *New York Times* takes the opportunity of directing attention to the state of hospital accommodation for this disease existing at Brooklyn, which will be read with no little surprise in this country. It describes the building as consisting of three blocks, one built of brick and occupied by the matron and her assistants and a limited number of patients, the other two structures constructed of wood, wholly adapted for patients, but wanting in reasonable accommodation of hospital wards. "It is not too much to say," states the *New York Times*, "that the hospital buildings are unfit to shelter swine, let alone human beings." More particularly it says that the wooden buildings "are all windows and cracks in the sides, and their roofs are sieves . . . . The sheds are built on damp ground, no excavations having been considered necessary for buildings which were to be used by small-pox patients."

Ruinous, insufficiently heated in cold weather, wanting in the means of cleanliness, the hospital has gained an evil reputation in the city, and the attempt to remove patients there gives rise to occasional riots. It is not certain what measures will be taken to remedy the state of things here described. The prevalence of small-pox in various parts of the United States has induced a deputation from the National Board of Health to visit the President, calling attention to the subject. He is stated to have replied that he would consider the matter, and would probably send the Congress a special message about the prevalence of the disease.

CRUSTACEAN PERCEPTION OF LIGHT.

THE interesting question of the power possessed by the crustacea to distinguish light of various colours has been re-investigated by Merjkowski. It will be remembered that M. Paul Bert made some experiments on the subject, and concluded that certain of the fresh-water crustacea possess this power, and that Sir John Lubbock had arrived at a similar conclusion with regard to ants. Merjkowski has experimented on the larvæ of Balanus, and on one of the marine copepoda, Dias longiremis. In a dark vessel the animals were dispersed through the whole of the water, but if light was admitted through a small opening, they collected in its vicinity. If the light admitted was rendered monochromatic, the result was the same, whatever was the colour of the light. Two windows were then employed, and closed with glass of different colours. If one admitted white, and the other coloured light, the former was always preferred. If the colour was a light shade, yellow-green and light-red, a few collected at it, the majority remaining in the white light. If two coloured glasses were employed, that which admitted most light was always preferred, whatever the colour. If, however, the two rays had an equal illuminating power, the crustacea divided themselves into two equal groups whatever was the nature of the colour. The least difference in the degree of light was at once responded to. The conclusion is that these creatures are sensitive to the quantity of light, but not to its character; to the amplitude of light-waves, but not to their number; and that their perception of light, therefore, differs essentially from ours.

COMPENSATION FOR FEVER IN FURNISHED APARTMENTS.

THE precautions taken against contagion, happily becoming more and more general among all sections of the community, occasion various complications not foreseen by the law. We will take an instance in point recently brought to our notice. In a high-class lodging-house of the Cavendish-square district, a child of the occupier of the second floor fell ill with scarlet fever. Carpets and superfluous furniture were at once removed, sheets saturated with antiseptic solutions hung before the doors, a bath placed outside for the reception and immersion in a disinfecting fluid of plates or any other objects coming from the sick room; in fact, so many precautions were taken, and such ample space allowed for the treatment and isolation of the patient, that there was no pretext for her removal to the hospital had a fever hospital for such a case been available. But it happened that, just as the fever broke out, a lady offered to rent the first floor apartments, which were to let, and intended residing there with her child. The landlady, however, thought that if she admitted new tenants when fever was present in the house she would, in spite of all the precautions taken to isolate the patient, expose herself to considerable blame, particularly if the new-comers chanced to contract the disease. On appealing to the parents of the sick child they offered some compensation to enable the landlady to keep the first floor vacant during the prevalence of the fever, and the intended tenant was warned not to come. When, however, the day of reckoning arrived the divergence of opinion as to what compensation, if any, should be given opened out the question we now wish to discuss. The parents of the sick child argued that they were not obliged to give any compensation at all, that the landlady was free to have let her first floor, the patient being properly isolated in the upper floor, and if they did promise to make any allowance it was an act of voluntary generosity on their part. The rent of the apartment kept vacant was generally estimated at two guineas and a half per week; and as there had been no service, no wear and tear, and the rooms were not even entered, the parents of the sick child, in offering compensation at the rate of two guineas a week, considered they were acting in a liberal manner. The landlady, however, argued, that if she received the full rent it would cover but half her losses, for occupiers brought many indirect profits. She further declared that the law should protect her, and that she should not be left alone to bear the brunt of either loss of reputation or of tenants. The landlady was, in fact, in a helpless position, for the ample accommodation in her house deprived her of all excuse to enforce the removal of the patient. On the other hand, no one would care to rent apartments where fever is prevalent. Could therefore the patient or her parents, though but the accidental cause of this trouble, be called upon for any sort of compensation? Or should such incidents be simply put down among risks and possible losses of lodging-house keeping? The special law regulating common lodging-houses compels the landlord to send away all tenants, though sometimes numbering as many as forty, sleeping in the dormitory where a case of infectious fever has occurred, and he further defrays the cost of disinfection, cleansing, and white-washing. But then the lodgers are invariably poorer than the landlord, while in high-class furnished apartments the tenants are very often, and, in fact, generally, in a better position than the person who lets the apartments.

POISONING BY GELSEMINUM.

DR. W. SEYMOUR, of Troy, New York, reports a case of poisoning by gelseminum in the *Berlin Medical and Surgical Journal* for Dec. 22nd, 1881. The patient was a muscular man, twenty-eight years of age, who after a drinking bout had taken some of the drug to "quiet his nerves." He had taken about two ounces of the tincture. His face was flushed; he was dozing, but could easily be roused, and talked intelligently; the pupils were moderately dilated, reacting to light, and there was slight double ptosis; pulse strong and full, about 100. An hour later the dipsomaniac, eluding his watcher, managed to get out to a drug store, and procured half an ounce of fluid extract of gelseminum, which he drank. He was found by the doctor, twenty-five minutes after, sitting in a shop, limbs relaxed and face pale, but capable of speech. As he refused to swallow an emetic, sulphate of zinc was administered through the nose. Copious vomiting followed this and a second dose that was given. In spite of this he became speedily unconscious; pulse 130; respiration 40, entirely thoracic; pupils moderately dilated, but acting. Brandy was given subcutaneously and by rectum, and after faradisation of the diaphragm and intercostal muscles he rallied from the state of collapse into which he had fallen, only to relapse shortly after, when the same measures were repeated, and also hypodermic injections first of atropia, then of carbonate of ammonia, and inhalation of nitrite of amyl, were employed. He died about five hours after taking the poison. Dr. Seymour records the case in the hope that experimentalists

will direct attention to the necessity for determining the antidotes to poisoning by gelseminum and their indications. For want of experimental authority he did not dare to push the administration of atropia or digitalis, which to be effective would probably have to be given in toxic doses.

THE INTERNATIONAL MEDICAL CONGRESS.

IN the first volume of the Transactions of the Congress we have a list of the members attending, which has evidently been prepared with very great care and at much pains, as the Christian names are given in full in nearly all cases. It is a long list, but one that possesses considerable interest as the roll-call of the greatest Congress ever held. A short analysis of the table, showing the number of members of each nationality, gives some rather striking results. The United Kingdom was represented by 2085 members, of whom 1145 were from London and the suburbs, and the British Colonies sent 62, Canada and Australia each sending 20. Next comes Germany with 203 members, closely followed by France with 201. Italy is represented by no less than 73. Holland sent 61, Belgium 55, Switzerland 36, Austria and Russia each 33. Peru, Uruguay, Finland, Bosnia, and Brazil are among many other countries which unite in swelling the total membership to 3182. The amount of matter to be printed in the Transactions has far surpassed what was originally computed, and has proportionately increased the expense, so that each member for his guinea subscription will have received printed matter of the cost of a guinea and a half. The amount of extra subscriptions hitherto received does not cover this additional expense; and it is hoped that members, on receipt of the four volumes of Transactions, will remember to supplement their guinea subscriptions by at any rate enough to cover the cost of the printed matter they have received, and so render it unnecessary to fall back upon the guarantee fund.

REMOVAL OF THE WHOLE UTERUS FOR CANCER.

THE entire uterus was removed for cancer on Jan. 3rd in St. Thomas's Hospital by Sir William Mac Cormac. The patient is a woman of thirty-four. She was admitted under Dr. Ord's care for obstinate constipation and signs of intestinal obstruction. A cancerous mass involving the cervix uteri, together with a tumour pressing on the rectum, were discovered. The method of abdominal section was selected, and as soon as the peritoneal cavity was exposed, the pelvis was found blocked by a tense fleshy everywhere adherent cyst, which compressed the rectum against the sacrum, and completely concealed the uterus and its appendages. In order to obtain space, the cyst was punctured, and found to contain very offensive pus, some of which it was impossible to prevent entering the pelvic cavity. The adhesions were then separated, and the cyst, which is probably ovarian, removed, with the uterus and ovaries. No attempt was made to stitch up the vagina or pelvic reflections of the peritoneum. A large double-barreled T-shaped drainage-tube was inserted, the end projecting from the vagina, and left in the cavity of the abdomen; this was used for frequent irrigation. Five days after the operation the temperature rose to 102·6°. There was some evidence of suppuration opposite the lower extremity of the abdominal incision. Sir William Mac Cormac broke down the already adherent edges of the wound; some pus escaped, and the cavity has since been daily washed out. Shortly after this the temperature fell to 99°, and at present, ten days after the operation, the patient's condition is excellent, and promises a speedy convalescence. There has been no general peritonitis. Eucalyptus lotions and dressings were employed.

LUNACY LAW REFORM.

THE Law Amendment Society has taken up the subject of Insanity, and Alexander L. Miller, Esq., Q.C., LL.D., Railway Commissioner, will read a paper on "Reforms in the Lunacy Laws" at a meeting to be held at 1, Adam-street, Adelphi, on Monday evening next, the 16th instant, Joseph Dodds, Esq., M.P., in the chair. We have not the slightest notion as to the views which prevail in this Society, or the recommendations likely to be adopted on the occasion, and we must be excused for forgetting what Mr. Alexander L. Miller has proposed, although his name is familiar to us as that of a reformer. It is, however, with great pleasure we notice any token of interest in this subject arising outside the profession, and in connexion with a Society which may be trusted to take a practical, and—which is more—a practicable, view of an enterprise that stands sorely in need of a little wise energy. It is not by any little tinkering the Lunacy Laws can be reformed. They are radically wrong throughout. They rest on a false basis. Insanity as a disease must be disentangled from its artificially made connexions with insanity as a social and legal cause of disability. Leave the disease with its treatment to the medical profession, and let the disability question be left to the lawyers. We would rather have nothing whatever to do with that consideration. Science will never be able to do its best for the sick in mind until it is able to treat them as it now treats the sick in body—that is, simply as patients, not as prisoners.

CHURCH BELLS.

"TASTES differ." Mephistopheles in the *play* of "Faust"—a very different matter from the libretto of the opera—exclaims, "What execrable taste some people have," as he stops his ears to shut out the sound of the peal. The objection of the fiend was doubtless more sentimental than æsthetic and physico-mental. Our own aversion to the clanging noise is exclusively of the last-mentioned sort, and we would further particularise the objection we entertain as relating almost exclusively to the ordinary church-going peal of three, or in some case five, bells rung or struck in monotonous discord—not perhaps musical discord as the music of bells goes, but discord of the most hideous and aggravating kind as regards the effects produced on an irritable nervous system. It is this perennial nuisance against which we protest, and which we think should in fairness be interdicted for the sake of the sick. The distant melody of a well-concerted peal of bells is neither disagreeable nor injurious, but the clang, clang, of the service bell is provocative of much real suffering and grievous exacerbations of disease in the case of the sick, and immeasurable ill temper and profanity on the part of the strong but "excitable." It is probably vain to hope we shall ever be spared this injury and annoyance.

THE OUTBREAK OF SMALL-POX AT NOTTINGHAM.

DR. SEATON has published a special report on the recent outbreak of small-pox at Nottingham. The disease was pretty certainly introduced into the town by a modified case from Derby. This case gave rise to twenty-three other cases which came under Dr. Seaton's notice; but by the arrangements existing for isolation, and the admirable measures adopted for vaccination and revaccination, the outbreak was kept within moderate limits. When, ten years before, Nottingham suffered from this disease, 357 lives were lost, and a vast amount of sickness and distress was caused. The means taken by Dr. Seaton to promote vaccination and revaccination constitute an instructive history in themselves, and cannot be too highly praised.

A CASE OF COMPOUND FRACTURE OF THE ELBOW-JOINT.

A CASE of compound fracture of the elbow-joint, occurring in some clay-pits at Dudley, has been the occasion of some professional irritation. From a report of the inquest in the *Birmingham Daily Post*, it appears that a man received a scalp wound, and also this injury to his arm, from the falling of some clay. The colliery surgeon recommended amputation through the arm, but the man requested to be removed to the Guest Hospital, where the house-surgeon attempted to save the limb, but after a month the case terminated fatally from blood-poisoning. At the inquest the colliery surgeon seems to have expressed an opinion adverse to the line of practice carried out at the hospital, and is reported to have stated that amputation was necessary to save the man's life, and that if he had recovered the arm would have been of no good to a working man. This evidence was rebutted by the surgeons of the hospital, and called forth some severe remarks from the coroner. We regret that such a course should have been pursued by the surgeon in question. Conservative surgery has of recent years made such strides that amputation for injuries to the upper limbs is comparatively rarely called for, and we fully sympathise with the efforts made in this case to save the limb. It is to be regretted that the danger of blood-poisoning was not successfully obviated by the use of some form of antiseptic treatment, but that was a peril to which amputation would also have exposed the patient, though in less degree. We have never yet seen an artificial arm that would have been of more service to a working man than his own with a rigid elbow.

SMALL-POX IN THE PORT OF LONDON.

DURING the last week no less than four vessels have been discovered in the river Thames with small-pox on board. In one case a vessel from Revel passed Gravesend, was, as usual, boarded by the Custom House officials, and to the question, "Have you anyone ill on board?" gave an answer in the negative. Early the next morning one of the crew was found to have small-pox of a most virulent type, the eruption being thickly confluent and distinctly hæmorrhagic. As the captain professed perfect ignorance as to the nature of the disease, believing the man to have had a cold, it seems impossible to take any legal proceedings. Such cases clearly show how easy it is at all times for any infectious disease to pass our quarantine barrier and be imported into London; and point to the great necessity for a vigilant Port Sanitary Authority—firstly, to discover infectious disease, isolating the patients; and, secondly, by thorough fumigation and disinfection, to prevent its spreading. The revaccination of this crew was at once carried out, and up to the present there have been no other cases.

OVARIAN EPITHELIUM.

M. SINÉTY, examining a perfectly healthy ovary which was embedded in the wall of a cyst, found upon its surface epithelial cells provided with vibratile cilia. The ovary was cut in two, one half was hardened in the ordinary way, the other was placed for twenty-four hours in dilute alcohol. Examination of the former showed that it was perfectly normal. On the latter there were found, among the small cylindrical cells which covered it, a certain number of larger size and furnished with cilia. These were found on all parts of the organ, near the fimbriæ as well as at the middle portion. Their presence is of considerable interest in reference to the movement of the ovule from the different parts of the surface to the Fallopian tube. Ciliary movement is recognised as playing an important part in the movement of the ovule in the tube. Sinéty supposes that the cilia on the surface of the ovary have escaped notice on account of their rapid disappearance after death, and because, all the cells not being thus provided, they are rarely recognisable in sections. He urges the desirability of investigating the point in any normal ovaries which may be removed by Battey's operation. The presence of ciliated epithelium on the surface of ovarian cysts has been observed by himself and Malassez, and he suggests that it may be merely an exaggeration of the normal condition.

"WOMEN AS PHARMACEUTISTS."

BEFORE the suggestion that women should be employed as pharmaceutists or dispensers is adopted, let other considerations besides that of mere "intellectual and physical fitness" have weight. The experience of the postal and telegraph offices, in which females are entrusted with the simple duties of selling stamps, issuing money orders, and taking in messages, would seem to show that there is one propensity of the sex which is in itself an insuperable obstacle to the employment of women in pharmacy. They *will* talk. This is a universally evident weakness on the part of those at present occupying the desks at both large and small offices. This evil is so widespread that we venture to predict the abandonment before many years have elapsed of any attempt to employ women in public offices. If females were entrusted with the duty of dispensing, cases of poisoning from misadventure would certainly increase in number, while less formidable blunders in the compounding of mixtures would become the rule. There is in the mind of woman an inherent disability for work of any kind which requires concentration of thought and mental isolation. It is not that she will not, she *cannot*, attend to the business in hand so exclusively as it is necessary the practical pharmaceutist should attend if his duties are to be discharged with credit to himself and safety to his customers.

A MEDICAL TRIBUNAL.

WE commend to the consideration of the Government a suggestion made in our leading columns last week—namely, the establishment of a medical tribunal. It would not be difficult to select from the ranks of the medical profession an expert physiological chemist, a pathologist, an experienced clinical physician and a surgeon—four in all—three forming a quorum, as the case to be investigated happened to be medical or surgical. This tribunal might be required to investigate and determine such issues of a purely scientific nature as were referred to it by the Judges, either in the course of a trial or afterwards, as in the case of law points reserved or sent up to the Justices for special consideration. It would be easy to construct such a tribunal, and the expense of maintaining it need not be very considerable. It is necessary in the interests of justice and public prudence that a step of this nature should be taken. Recent events have made the decisions of courts of law usurping the authority to adjudicate issues of science obviously and, therefore, mischievously, ridiculous.

COLOUR-BLINDNESS.

WE learn from Dr. Macgowan, who has been engaged for some time in obtaining information in regard to colour-blindness in Japan and Indo-China, for which purpose he has interrogated numerous painters, dyers, and others likely to become acquainted with that visual defect, that it is unknown or unrecognised in these regions. Lately, through the courtesy of Mr. Dowthwait, Dr. Macgowan obtained the services of his hospital native assistant in subjecting to examination above a thousand applicants for relief at that

institution. The result of that examination, and that which Dr. Macgowan made among the crews of gunboats in the imperial service of China, failed to afford evidence of the existence of Daltonism. The rarity, if not absence, in China of defective colour-vision, and the evidence of its existence among Europeans and Americans, is, Dr. Macgowan thinks, suggestive of inquiry whether this dyschromatopsia is not an ethnic characteristic. The examinations instituted in India among candidates for employment on railways were probably restricted to Eurasians, and the cases there discovered may not have been those of natives. Nubians, it has been lately ascertained, are free from the defect. The irides of the Chinese and Japanese examined by Dr. Macgowan were generally dark hazel, the others black, which are the prevailing colours.

DIABETES.

IN a communication to the Académie de Médecine on the subject of the pathological anatomy of diabetes, M. Lécorché has maintained that the functional activity of the liver is so essential for the existence of the disease, that the malady is arrested if grave structural changes occur in the organ. Congestion of the liver is, however, invariable in the disease, and, in the later stages, secondary structural changes occur. Atrophic cirrhosis is too common in old cases to be a mere coincidence, but it is to be referred, at least in part, to the excessive ingestion of liquids which is so constant a symptom of the disease. At the same meeting M. Magitot advanced the opinion that diabetics are extremely liable to an affection of the jaw, which he calls alveolar osteo-periostitis, which may commence at the onset of the disease and continue throughout its course. The alveolar affection commences by a deviation of the teeth from the perpendicular, they then become loose, and eventually fall out. Ultimately the alveolar borders undergo resorption, sometimes after gangrene of the gum. The latter change is usually soon followed by the fatal termination.

THE LATE DR. HARVEY, OF DUBLIN.

AT a recent meeting of the Council of the Medical Society of the College of Physicians in Ireland, the following resolution was unanimously adopted:—"That the Council of the Medical Society of the King and Queen's College of Physicians, Ireland, desire to place on record their profound regret at the death of Dr. Reuben Harvey, a Member of Council, and their sense of the loss which the Dublin School of Medicine has sustained by his demise, and that a copy of this resolution be submitted to the Honorary Secretary at the next meeting of the Society."

HUNGARIAN EXPERIMENTS ON ANTHRAX.

AT the last meeting of the Hungarian Natural Science Society Dr. Rozsahegyi gave an account of some experiments on the prophylactic inoculation of anthrax, initiated by M. Pasteur. An attempt was made to communicate the disease to a series of inoculated sheep, and to others which had not been inoculated, and it was found that the death-rate in the latter was 93 per cent., in the former only 1·45 per cent. If, however, regard was paid not only to the deaths which resulted from the infection of anthrax, but also to the total mortality from all causes during the experiments, this difference was found to be somewhat less, the mortality among the inoculated animals being 14 per cent., and among the others 94 per cent. The large mortality in the protected animals from other causes than the subsequent infection seems to show that the process of inoculation is not itself free from considerable risk, either directly, or indirectly by rendering other diseases more fatal. Another point of importance raised, but not answered, is the question, Within what time may the flesh and milk of inoculated animals be regarded as free from all danger of conveying the disease to man?

SIR JAMES PAGET.

OUR readers will be glad to receive, as we are to convey, good news of Sir James Paget. He is recovering well, and his strength is so far repaired that he can walk five or six miles a day, climb hills, &c. We can only hope that he will enjoy to the full the holiday which is imposed upon him. To men who work as he does the balance is only restored by an enforced absence from work.

THE Central Executive Committee of the St. John Ambulance Association has announced that a meeting of representatives from the different London hospitals, the medical staff of the Association, and of divisional police-surgeons, will be held at St. John's Gate on the afternoon of Monday, Jan. 16th, at half-past four o'clock, to consider a system of placing ambulance stations in telegraphic communication with the hospitals of the metropolis, and the best means of wheeled transport.

WE understand that the vacancy in the office of assistant registrar at the University of London has not attracted as much attention from the graduates as it should do, for the simple reason that candidates, whose scientific and literary attainments have given them a world-wide reputation, are deterred from entering the lists against a competitor whose claims are strengthened by the fact that he is the son of a gentleman who for many years held an important office in the University.

MEETINGS of the Royal Commission on Small-pox and Fever Hospitals were held at No. 10 Committee Room, House of Commons, on the 6th and 7th inst. There were present at the meetings Lord Blachford, Sir Rutherford Alcock, Mr. Arthur W. Peel, M.P., Dr. A. Carpenter, Dr. J. Burdon Sanderson, Dr. W. H. Broadbent, Mr. Jonathan Hutchinson, and the secretary, Mr. Nathaniel Baker.

THE Gresham Lectures will be delivered by Dr. Symes Thompson on Jan. 17th, 18th, 19th, and 20th. Subject, "The Spinal Cord." The lectures are illustrated by diagrams (limelight), are free to the public, and commence each evening at 6 P.M.

THE medical evidence in the case of alleged poisoning at Wimbledon is, as our readers will probably have observed, of more than ordinary interest. That evidence, as well as other salient features in this remarkable case, will, at the proper time, be matter for comment in our columns.

THE attack of illness which contributed to Lady Fergusson's death at Bombay is described by the medical attendants as one of sporadic cholera. The mortality from cholera at the present time in Bombay appears to be not more than usual.

DR. GEORGE H. KIDD has been nominated President of the Dublin Branch of the British Medical Association for the ensuing year, and will deliver an address at the annual meeting to be held on the 26th instant.

AT a general court of governors held at Guy's Hospital on the 11th inst., F. A. Mahomed, M.B. Cantab., F.R.C.P. Lond., was appointed Assistant-Physician to the hospital.

PHARMACOLOGY AND THERAPEUTICS.

HYDROCHINON IN OPHTHALMIC SURGERY.

ACCORDING to Förater, hydrochinon (*vide* THE LANCET, 1880, vol. ii., p. 778) is particularly suited as an antiseptic for operations on the eye. He has found it of the greatest service in corneal ulcers of infectious parasitic nature. It lessens the secretions, does not in the least irritate the conjunctiva or cornea, and has a certain antiseptic action on the diphtheritic process. Similar to carbolic acid in its antifermentative powers, it is superior to boracic acid in its ready solubility in water, and is similar to it in the very little irritation which it causes.

PAPAINE.

Papaine is one of the most remarkable organic substances in the vegetable kingdom. It is obtained from the Carica papaya, and is closely connected with albuminoid substances, both in its composition and chemical properties, being, in fact, a sort of vegetable pepsine. Its power of digesting albuminoid substances has been carefully studied by Wurtz. In one experiment it was found that the papaine dissolved 1000 times its weight of moist fibrin, of which the largest part was transformed into peptone, and was not precipitable by nitric acid; and that, in consequence of the complete hydration of the fibrin, it had even formed a small quantity of a crystallisable body such as is known to be formed during the process of gastric digestion. In another experiment ·05 gramme of the same papaine liquefied 100 grammes—i.e., two thousand times its weight of moist fibrin, with the exception of a small residue. The energy of this digestive action led Wurtz to the conjecture that the ferment, being of an albuminoid nature, might be made to act upon itself to cause its hydration, and this expectation was verified on experiment. An aqueous solution in a sealed tube, kept at 50° C. for several weeks, was found to become slightly turbid, and to contain a product more hydrated than itself. Further experiments led to some interesting conclusions regarding the mode of action of the ferment—namely, that the first action of the papaine is to fix itself upon the fibrin, and, perhaps combining with it and the insoluble product, gives by the action of water the soluble products of the hydration of the fibrin, and, at the same time, the ferment is again set free and can exercise its action on a new portion of fibrin. The action recalls that of some inorganic agents, as sulphuric acid, small quantities of which can exercise a hydrating action in consequence of the ephemeral formation of combinations that are continuously produced and resolved. What function this singular substance can fulfil in the plants in which it is found is a question to which no answer seems at present to have been even suggested.

CINNAMIC ACID.

The synthetical production of cinnamic acid, which is due to Dr. E. Jacobson of Berlin, has furnished a source from which the substance may be obtained at a moderate price. Formerly its only source was the oil from the cinnamon bark, although it is also contained, in variable quantities, in gum benzoin. The reduced price of the acid has caused attention to be directed to its antiseptic properties, which are said to be even greater than those of salicylic acid. It has the superiority over carbolic acid of being tasteless, inodorous, and innocuous. It is readily soluble in olive oil, vaseline, and a solution of borax; but is scarcely at all soluble in water.

HYOSCINE.

According to a paper read by Merck of Darmstadt, at the recent Pharmaceutical Conference, Professor Landeburg has extracted from henbane a second alkaloid, the existence of which was suspected from the difference in the physiological action of the crystallised and amorphous hyoscyamine. It appears to be isomeric with the other two mydriatic alkaloids of the Solanaceæ, atropine and hyoscyamine, and has the empirical formula $C_{17}H_{23}NO_3$. Whilst, however, atropine and hyoscyamine split up into tropic acid and tropine, hyoscine yields as decomposition products tropic acid and pseudo-tropine.

CHRYSAROBIN.

In order to ascertain whether chrysarobin, given internally, becomes converted by oxidation into chrysophanic acid, Lewin and Rosenthal administered it to guinea-pigs in the form of pills. The urine of a large rabbit contained 0·1 gramme of chrysarobin on the day after administration, and a still larger quantity was obtained from the fæces. On the fifth day, when in all 1·45 gramme of chrysarobin had been given, the urine contained albumen and blood. During the next nine days chrysophanic acid as well as blood were contained in the urine. This shows that the oxidation of the chrysarobin was partial only, and that a considerable portion was excreted unchanged. In order to determine the fact of absorption by the skin, a 6 per cent. ointment was applied to the shaved skin of the abdomen and covered with an impermeable material. After three applications the urine gave a distinct reaction of chrysophanic acid; after the third application the evidence of chrysarobin was detected; after the sixth the urine contained albumen; the animal lost flesh rapidly and died. The examination showed only a slight parenchymatous nephritis. The effect on the kidneys is to be ascribed to the excretion of the unoxidised substance.

RHINACANTHUS COMMUNIS.

Neumann of Vienna has lately published in the *Wiener Med. Blätter* (1881, No. 27) an account of the trial of the tincture of the root of a plant growing in the interior of Siam, which is used in India and China as a remedy for skin diseases, especially ringworm. Vogl supposes it to be the rhinacanthus communis. In chronic eczema papulosum, and in herpes tonsurans vesiculosus, daily applications of the tincture caused the characteristic features of the eruption to disappear in a fortnight, but the infiltration of the skin was uninfluenced. No prejudicial effects were observed. Neumann thinks that further experiments with a stronger preparation are desirable. We referred (THE LANCET, 1881, vol. i., p. 887) to the isolation of the active principle, rhinacanthin, by Liborius, and it would be well that the therapeutical action of this substance should be ascertained.

THE ACTION OF PILOCARPIN ON THE HAIR.

A remarkable occurrence, to which we referred on August 13th last, has been reported by Prentiss in the *Philadelphia Medical Times*. In a case of pyelo-nephritis with prolonged anuria, in a woman of twenty-five years of age, pilocarpin was injected subcutaneously. Twelve days after the commencement of the treatment the light blonde hair of the patient began to assume a darker colour, which rapidly increased. On the 26th day it was dark brown, and four months later coal-black, although the pilocarpin was discontinued at the end of seven weeks. No change in the structure of the hair could be discovered under the microscope, except that the hairs had become thicker and contained pigment. On other parts of the body the hair had also become darker, although to a less degree than on the head. In connexion with this singular effect a case recorded by M. André on the efficacy of pilocarpin in alopecia may be mentioned. A woman, aged thirty-three, had lost the whole of her hair; head, eyebrows, eyelids, axillæ, and pubes were bare. After trying various remedies in vain, a centigramme of hydrochlorate of pilocarpin was injected beneath the scalp, and increased without inconvenience to 2·5 centigrammes. Diaphoresis was so abundant that we are told that, having to walk home two leagues after each injection, her boots were flooded with sweat. In three weeks, however, a growth of hair was apparent, and after ten weekly injections the hair on the head was two centimetres long, and elsewhere it was gradually appearing.

FICUS DOLEARIA.

The peculiar anæmia due to the presence of the Anchylostoma duodenale appears to have been long known in Brazil under the designation "intertropical hypohæmia;" and a physician of Rio Janeiro, Dr. Moncorvo, states that the most effective treatment consists in the administration of the juice of ficus dolearia, or ficus gamellaria. It is an old native remedy for the indigenous disease. Moncorvo is inclined to ascribe its drastic and vermifuge properties to the presence of dolearine, a sort of vegetable pepsine, analogous to, perhaps identical with, the papaine of Carica papaya. This substance has already been administered with advantage to the St. Gothard sufferers.

AT the quarterly meeting of the Directors of the Naval Medical Supplemental Fund, Sir W. R. E. Smart, K.C.B., M.D., Inspector-General, in the chair, the sum of £65 was distributed among the various applicants.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wandsworth (*Metropolis*).—Messrs. W. N. Kempster, Oakman, MacDonagh, G. E. Nicholas, M.D., F. F. Sutton, M.D., and A. Walker, M.D., in their report on the sanitary condition of this district in 1880, write of the "great improvements" effected in it, both as regards the extraordinary growth of population and the attainment of a higher standard of health. The population of the Wandsworth district, estimated from the results of the recent census, is given in the middle of 1880 at 205,300. The birth-rate of the year is stated at 34·2 per 1000, the death-rate at 17·5—the death-rate for London during the same period being 22·10 per 1000. In the different sub-districts into which the district is divided the death-rate per 1000 of the population was as follows:—Battersea, 19·7; Wandsworth, 17·6; Clapham, 14·9; Streatham, Tooting, and Balham, 13·9; and Putney and Roehampton 13·6. Of the principal zymotic diseases small-pox was fatal in only three instances, but towards the close of 1880 the disease began to assume serious proportions. Scarlet fever was very prevalent and fatal; diarrhœa prevailed largely, "for which the heat and humidity of the year were greatly accountable"; and whooping-cough was also prevalent. In the observations on the sickness and mortality among the union poor Mr. Kempster directs attention to his inability to obtain information mainly arising "from defective registration." Surely this is within the reach of the amending hand of the Local Government Board? But it must be confessed that the Board rather encourages this negligence than otherwise. In respect to the sanitary work and administration of the district, the question of pig nuisance and the condition of the water-supply receive particular attention. Wandsworth appears to be regarded as a favourable locality for pig-keeping. This nuisance is, however, being very steadily pursued and hunted down; and Mr. Oakman reports successful proceedings against 1154 pigs in Battersea West alone. Mr. Kempster observes: "With the dense population now located in the district there can be no doubt that all pigs should be removed—a matter which could now be carried out without difficulty, as the pig feeders seem to be aware that the time has come that they must migrate elsewhere; and there can be no doubt that a nuisance and a danger to health are constituted by the keeping of pigs, boiling and preparation of their food, the accumulation of manure, and the surroundings generally." The water-supply is still a source of complaint in the Wandsworth district, and is termed by the medical officers of health "a disgrace to the sanitary legislation of the present day." The Thames water is in question, and is deemed by the writers, following Dr. Frankland, as "often *grossly polluted* with sewage matters." Even the analyses of Dr. Crookes, Mr. Odling, and Dr. Tidy have not been able to satisfy them in this respect.

Christchurch, New Zealand.—Files of the New Zealand papers give us further information as to the state of health in the Christchurch district there, and news as to recent public health legislation in the colony. Dr. Courtney Nedwill reports on the state of the public health in his district for the quarter ending June 30th; and we again notice the marked resemblance his report possesses to that of a medical officer of health in a home district. He is concerned during the quarter with "fever" (mostly typhoid), with diphtheria, scarlet fever, and measles. The fever and diphtheria are both in excess of the quantity of those diseases observed in the corresponding quarter of the previous year; and of the fever he writes: "Typhoid fever during the quarter has not followed its usual course of diminishing in frequency as winter advances. The number of cases reported in May was more than double the number reported in April. The anomaly will be still more apparent if we look at the same months of 1880; in that year the April cases number twice as many as those in May. Either under the influence of dry, warm weather, or the decomposition of organic impurities, or the permeation of the filth-sodden ground by air through the fall of the water-level, typhoid fever undoubtedly has been unusually prevalent during the winter." Small-pox was introduced into the district by a case from London during the quarter, and the question of vaccination had to occupy Dr. Courtney Nedwill's attention. Public vaccination, although compulsory, is very defective in the colony, and there is an absence of hospital provision for the isolation of cases of infectious disease, and of public means for the disinfection of infected things. Dr. Courtney Nedwill would have the practice of public vaccination in the colony assimilated to English rule and procedure. In a subsequent special report Dr. Courtney Nedwill relates an outbreak of typhoid, amounting altogether to thirty-five cases, three of which proved fatal, caused by the consumption of infected milk, issued from a particular dairy. The clue to the outbreak had been obtained by Mr. J. D. Frankish, who had been acting for Dr. Nedwill during a temporary absence of that gentleman from duty, and during whose period of charge of the district the outbreak had occurred. Typhoid had happened at the dairy before the disease had appeared in the district, and Dr. Nedwill describes the state of things he found there as follows:—"The homestead is surrounded by pools of filthy water; it has a pump, on an artesian pipe, in which there is a hole admitting of leakage from the ground, which is saturated with filth, and the out-office is in a dilapidated condition with excrement coming up into the seat, and oozing through the boards at the back. I was informed no precaution whatever had been taken either to disinfect or to bury the excreta of the patients." So it is we see our worst habits and practices transferred to the antipodes, and we congratulate Christchurch as possessing in Dr. Courtney Nedwill a medical officer of health so apt to discover and appreciate what is needed to prevent Christchurch sinking still further into those evil habits which would be apt to blight her health-future. The Legislature of New Zealand adopted in September last an amendment of the Public Health Act of 1876, which required medical practitioners to notify to local authorities the existence of infectious diseases, and provided a fee of two shillings and sixpence for each notification, not exceeding three from the same house in the course of the month; and also for the registration and regulation of dairies, and for prohibiting the sale of milk in cases where the public health was likely to be endangered by the sale.

DORKING PIGS AND HOUSE SPACE.

The Dorking Local Board has applied to the Local Government Board to confirm certain by-laws as to nuisances and as to new buildings. But here a difficulty has arisen. Ratepayers have taken objection to one by-law, which would fix the distance of a pig-stye from a dwelling-house at 100 feet, and of another which would give to each new house an air-space of 250 feet free from any erection behind each house. A memorial has been sent to the Local Government Board to this effect. It is not averred that pigs in Dorking are less liable to nuisance than elsewhere, but in effect it is stated that the experience as to pigs in Dorking would be satisfied by a distance of fifty feet, and that to appoint a greater distance would be derogatory equally to Dorking pigs and to Dorking ratepayers and habits. As to the air-space behind new houses, the memorialists would have it reduced to 150 feet. Old Dorking possesses lanes and strips of ground which, if built upon, could not furnish the requisite space—an excellent argument, we should think, for not repeating the grave error attaching to the old mode of construction. The Local Board are clearly in the right in insisting upon measures that shall prevent a newly-built Dorking edifice from repeating the errors of old Dorking.

An inquest was recently held at Rochdale on a fatal case of small-pox in which alleged negligence was charged against the local authorities. The case occurred under circumstances of great wretchedness, and before a removal could be effected to a proper hospital the case ended fatally. The hospital to which the case could have been removed apparently lies outside the Rochdale district, and the arrangements for removal of cases thereto were insufficient and incomplete.

The owner of eleven houses, in Poplar-place, St. Pancras, has been fined by the Clerkenwell police magistrate for neglecting to supply proper sanitary accommodation and suitable water-supply for his houses. The summons was issued on the application of the St. Pancras vestry, and the fines and costs amounted to £112 2*s*.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In the twenty-eight large English towns now dealt with by the Registrar-General in his weekly return, 6002 births and 4080 deaths were registered during the week ending the 7th inst. The annual death-rate in these towns showed a decline from that which prevailed in the previous week, and was equal to 25·2 per 1000 of the estimated aggregate population. The lowest rates in these towns were 13·3 in Halifax, 18·6 in Blackburn, 18·7 in Birkenhead, and 18·8 in Huddersfield; the rates in the other towns ranged upwards to 30·5 in Brighton, 31·2 in Salford, 31·3 in Liverpool, and 36·9 in Preston. The deaths referred to the principal zymotic diseases in these towns were 592 last week, and included 169 from whooping-cough, 145 from measles, 133 from scarlet fever, 57 from "fever" (principally enteric), 34 from diphtheria, 30 from diarrhœa, and 24 from small-pox. The lowest death-rates from these zymotic diseases occurred in Birkenhead and Bristol, while in Portsmouth and Hull the zymotic death-rates showed the largest excess. Whooping-cough showed the largest proportional fatality in Salford and Brighton; measles in Preston, Leeds, and Salford; scarlet fever in Hull, Nottingham, and Brighton; and "fever" in Plymouth and Portsmouth. Scarlet fever caused 19 more deaths in Hull, making 661 which have occurred since the beginning of July last. The 34 deaths from diphtheria in the twenty-eight towns included 13 in London, 14 in Portsmouth, and 3 in Birmingham. Small-pox caused 22 more deaths in London and its suburban districts, one in Nottingham, one in Oldham, one in Bolton, and one in Leeds. The number of small-pox cases in the metropolitan asylum hospitals, which had been 474 and 485 on the two preceding Saturdays, further rose to 485 at the end of last week; these included 115 in the Convalescent Hospital at Darenth. The new cases of small-pox admitted to these hospitals during last week were 76, against 93 and 78 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 411 and 596 in the two previous weeks, declined again last week to 510, and but slightly exceeded the corrected weekly average. The causes of 116, or 2·8 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths did not exceed 0·9 per cent. in London, whereas it averaged 4·5 per cent. in the twenty-seven provincial towns. All the causes of death were duly certified in Bradford, Derby, and Cardiff; whereas the proportions of uncertified deaths were largest in Huddersfield, Preston, Sheffield, Leeds, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in the eight Scotch towns, which had been equal to 24·5 and 24·7 per 1000 in the last two weeks of 1881, declined to 22·9 in the week ending the 7th inst., and was 2·3 below the average rate in twenty-eight of the largest English towns. The deaths referred to the principal zymotic diseases in these Scotch towns, which had been 95 and 84 in the two preceding weeks, were again 84 in the week ending last Saturday; of these, 21 resulted from whooping-cough, 19 from diphtheria, 13 from scarlet fever, 13 from diarrhœa, 11 from measles, 7 from "fever," and not one from small-pox. The annual death-rate from these zymotic diseases was equal to 3·6 per 1000 in the eight towns, and was almost identical with the average rate (3·7) from the same diseases in the twenty English towns. The highest zymotic death-rates in the Scotch towns last week occurred in Glasgow, Greenock, and Paisley. The 21 deaths from whooping-cough in the eight towns showed a further increase upon recent weekly numbers, and included 17 in Glasgow and 3 in Aberdeen. The 19 fatal cases of diphtheria included 12 in Glasgow and 3 both in Edinburgh and Greenock. Six of the 13 deaths from scarlet fever were returned in Glasgow, 4 in Edinburgh, and 2 in Paisley; and 10 of the 11 from measles occurred in Glasgow. Fever fatality showed a marked decline, while the deaths from diarrhœa were excessive for the time of year. The deaths attributed to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy) were 135 last week, showing a decline of 9 from the number in the previous week.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which in the last five weeks of 1881 steadily increased from 24·5 to 39·0 per 1000, was equal to 36·0 in the week ending the 7th inst. The deaths in the city showed a decline of 21 from the number returned in the previous week; 38 were referred to measles, 7 to "fever," 2 to scarlet fever, 2 to diarrhœa, and not one either to small-pox, diphtheria, or whooping-cough. The annual death-rate from these principal zymotic diseases was equal to 7·3 per 1000 in the city, while the rate from the same diseases did not exceed 3·6 per 1000 in London and 2·5 in Edinburgh. The fatal cases of measles, which had rapidly increased during the four previous weeks from 11 to 39, were 38 last week. The seven deaths referred to "fever" showed a further increase upon recent weekly numbers. The deaths of infants corresponded with the number in the previous week, while those of elderly persons showed a decline.

THE REGISTRAR-GENERAL'S WEEKLY RETURN IN 1882.

From the commencement of this year the Registrar-General's Weekly Return will contain the vital statistics for eight towns additional to the twenty which had previously been dealt with. These twenty-eight towns will include all the municipal boroughs the enumerated population of which exceeded 70,000 in April last. Of these eight added towns Bolton and Blackburn have an estimated population exceeding 100,000, while Preston is credited with nearly 98,000. The estimated populations of Derby, Birkenhead, Huddersfield, and Cardiff range between 80,000 and 90,000, while the population of Halifax, the smallest town added to the list, is estimated at 74,713. Among the twenty-eight towns, however, Plymouth has the smallest population, 74,449, this town being one of the twenty dealt with up to the close of last year. The only English urban sanitary districts having in April last a larger population than Plymouth, and not included in the Registrar-General's list, as at present constituted, are Croydon and West Ham. Neither of these towns, however, is a municipal borough, and both are included in the outer ring of greater London for which the vital statistics have been for some years published in the weekly return. There are four urban sanitary districts which had enumerated populations at the last census ranging between 60,000 and 70,000, which would have been included in the list if the minimum had been fixed at 60,000; these are Southampton, Swansea, Gateshead, and Rochdale. Fourteen other urban sanitary districts would have been added if the minimum had been fixed at 50,000. It follows, therefore, that there were at the recent census, forty-seven urban sanitary districts which had an enumerated population exceeding 50,000 persons. It may be hoped that the publicity which this action of the Registrar-General will give to the mortality statistics of these eight large towns may strengthen the hands of those who are officially responsible for their sanitary condition. The mortality statistics of the large Lancashire towns have long been a standing reproach to the intelligence, wealth, and commercial energy of the country; and we are glad to see that the additions to the list include three of these towns. That the Town Councils of Blackburn and Preston should have fixed the salaries of their medical officers of health at only £120 and £150 per annum, does not give a favourable impression of their appreciation of the true value of public health, or of the costliness of excessive sickness and mortality rates.

THE GREEK CENSUS.

The Home Department of the Greek Government has recently issued a report upon the results of the census taken in 1879, showing that the population then enumerated was 1,679,470, and exceeded by nearly 14 per cent. the number counted at the previous census in 1870. M. Mansolas, the Chief of the Greek Statistical Bureau, is fully entitled to claim this fact as conclusive evidence of the increasing prosperity of the country. About half a million of this population resided in the Ionian and other islands, whereas the remainder of the population was enumerated in the Peloponnesus and in continental Greece. It appears from the census taken by the Royal Commissioners in the provinces recently ceded to Greece by Turkey, that their population is little short of 300,000, so that the population of the kingdom of Greece, as at present constituted, may safely be estimated

at two millions of persons. It is a noteworthy feature of the Greek population that the number of males exceeds that of females, forming an exception to the almost constant excess of females in European populations. The proportion of females in Greece is but 90·6 to 100 males, whereas in England the proportion is 105·4 to 100. M. Mansolas reports that the excess of males in Greece shows an increase upon that which prevailed in 1870, and states that Belgium and Italy are the only other European nations showing a similar excess of males. The mean age of the Greek population is stated to be 25 years and one month, showing an increase of three months upon the mean age on the census in 1870. Without more statistical data it is doubtful whether this slight increase in the mean age of the Greek population is due to a decline in the death-rate or to an increase in the birth-rate. It is certain that the mean age in Greece is considerably lower than in most of the other European States; the mean is 26½ in England, 27 in Italy, and 31 in France. Unfortunately no statistics of births and deaths in Greece are available, so that the mean age of the population is of little value for estimating the mean duration of life as a measure of the sanitary condition of the nation.

IRISH CENSUS REPORTS: COUNTY LOUTH AND COUNTY AND TOWN OF DUNDALK.

This, the seventh of the series, has recently been issued by the Commissioners, and from it we learn that in 1841 the population amounted to 128,240, in 1871 to 84,021, and in 1881 to 77,684, being a decrease of 50,556 in forty years. The births registered during the decade numbered 20,660, and the deaths 15,667, or a natural increase of 4993. During the same period 5699 emigrated from the county. As regards the condition of elementary education, 37,230 could read and write, 11,578 read only, while the illiterate numbered 28,876.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

PREVENTION OF CONTAGIOUS DISEASES.

The following resolution will be discussed at the next meeting of the American Public Health Association to be held at Savannah, Georgia:—"That the American Public Health Association earnestly recommends the municipal and State Boards of health to urge upon the legislative bodies of this country the enactment of a law constituting it a criminal offence to knowingly communicate, or to be instrumental in communicating, by any direct or indirect means, a contagious disease, such as small-pox, scarlet fever, or venereal disease, and giving to said Boards of Health, and to the State and municipal health officials under their control, the same power in the prevention, detection, suppression, and gratuitous treatment of venereal affections, which they now possess in the case of small-pox and other contagious diseases."

DRAINAGE AND HEALTH RATES.

The advantage of good drainage is well exemplified by the diminished death-rate in the division of Harwich, known as Wilton, which until 1878 was wholly without drainage. At that time, owing to the compulsion of the River Commissioners, an efficient system was introduced; the under-mentioned figures will show with what result:—Population of Wilton 5782. Death-rate in 1878, 21·5; in 1879, 18·8; in 1880, 16·4; in 1881, 14·3.

SMALL-POX IN BELFAST.

During December 105 persons were removed to hospital, and every precaution taken to prevent the further spread of the disease. The necessity of having a disinfecting apparatus for the borough is greatly felt, and the sanitary committee of the Town Council have recommended that one of Messrs. Frazer and Co.'s portable disinfecting apparatus be ordered.

We have been favoured with examples of the series of health lectures delivered to the people by the Edinburgh Health Society. One of the lectures is entitled "Some Lessons from Modern Medicine," by Dr. James A. Russell; the other is "On the Human Body," by Dr. D. J. Cunningham, Senior Demonstrator of Anatomy at the University of Edinburgh. Both are excellent examples of the method of teaching adopted, and were well calculated to enlist the attention of a popular audience.

THE "STRANGE CONFESSION" IN STAFFORDSHIRE.

WE have received from Dr. F. W. Warrington, of Congleton, the following important communication on the case of mutilation which is now exciting so much public interest:—

Isaac Brooks, of Rushton, Staffordshire, aged twenty-nine years, single, stonemason and small farmer, was seen by me at his own home, five miles from my house, at 8 o'clock on the morning of Dec. 5th, 1879. He was lying in bed with his knees drawn up, with an expression of great pain and anxiety on his countenance. I found that the whole of his left testicle, with its coverings, was lying completely outside the scrotum. The coverings were uninjured. The wound in the scrotum through which the testicle protruded seemed small. With some difficulty I returned the organ into its place within the scrotum, and then had an opportunity of seeing the character of the wound through which the organ had been displaced. It was a cleanly cut wound from an inch and a half to two inches in length, made transversely over the left side of the scrotum about midway from above downwards. I closed the wound with three sutures and applied wet lint compress. Directly after this had been done great pain was experienced in the left groin, running backwards to the left loin. Hot fomentations applied for half an hour relieved this pain, and it did not return. I visited him again on Dec. 8th, and removed the sutures. The wound was almost healed. The testis was a little swollen, but not painful. The man soon recovered his usual state of health, which was not robust, owing to valvular disease of the heart since he had rheumatic fever fourteen years ago. He was a man well-known to me, of eccentric habits, close, and reserved. He was fond of music and of reading, often studying an old-fashioned Encyclopædia, and took a pride in using long words. Since his death I have heard that he sometimes consulted fortune-tellers, and was guided by them in some of his actions. He had rather pleasing manners for a man in his station of life, and was very deliberate in his conversation and actions. These habits and manners, in addition to his being fond of dressing well when he went to market, &c., made him a somewhat conspicuous character among the plain old-fashioned farmers and labourers in the lonely hill district in which he lived. They considered he wished to make himself superior to what he really was, and was not a favourite amongst them. His account of the injury was that the previous night at 11 P.M., on coming down the main road leading to his home, three men sprang out of the hedge and attacked him. "Each man knew his part, and did it well." "One took," he said, "out my pocket-handkerchief from my side coat-pocket and placed it over my eyes and mouth. Another man came behind me, pinned my arms and placed his knee in my back, holding me fast. At first I struggled very much," he continued, "but after a time I began to think more of my breath than anything else, as I was almost suffocated. The third man, whilst I was in this state, slipped down my trousers and cut me. I did not feel the cutting so much, but the pain was dreadful when he pressed out the part. My penknife was removed from my trousers pocket, and I believe the cutting was done with it." The penknife was, it seems, missing, but beyond this no attempt at robbery was made. Brooks' money and other articles in his pockets were untouched. He declared he did not know who the men were who committed this outrage on him. Although the night was moonlight he was so suddenly attacked and blindfolded he could not recognise his assailants. They never spoke during the proceedings. They left him in the road standing up blindfolded, and ran away in the opposite direction to his house. He walked home, a distance of a thousand yards.

A month afterwards, before the magistrates, and subse-

quently at the assizes, he swore to the identity of two men out of the three, and he believed he knew the third but could not be sure. These were two neighbouring farmers, Henry Johnson and Samuel Clowes, who were sentenced to ten years' penal servitude.

I was sent for again to see Isaac Brooks on Feb. 13th, 1881. On arriving at his bedside, about 4 P.M., upon asking him what was the matter he answered, "I have the same complaint I had more than a year ago." I said, "What was that, rheumatism?" He said, "No; I have been again attacked in the same road, but higher up, by four men. I tried to escape, and had nearly done so by getting over a wall, but they caught me, unfastened my trousers, and hurt me." This occurred about 11.30 the night before. The lower part of the scrotum was much swollen, and dark-coloured. There was a wound across the raphe at the lowest point, gaping very much, about two inches in length and filled with clotted blood. There had been extensive hæmorrhage. Cobwebs, tobacco, dry rags, &c., had been applied to stop the hæmorrhage. He informed me that after the outrage on him he applied his pocket-handkerchief to the wound, which at that time bled freely, and walked home. Soon after he arrived home the bleeding stopped. During the night, after he had got very warm in bed and gone to sleep, the bleeding commenced again, and he awoke finding the bed saturated with blood and running on to the floor. He called up his mother, being greatly alarmed, and after applying the above-mentioned remedies and the bleeding still continuing, a large hairpin was thrust through the tissues from where the blood came, and round this was twisted a quantity of worsted. This, he informed me, effectually, for the time, answered the intended purpose. After giving him what instructions I thought necessary I left him. Next morning he sent for me again, stating that the bleeding had returned, and he was afraid he should die. I visited him about noon, and found that during the night they had been obliged to insert another pin and worsted around it to stop the bleeding. As on my first visit, so again, I placed before him his real condition, and the danger he was in living in such a solitary situation five miles from medical aid. He reluctantly consented to accompany me to the Congleton Cottage Hospital, as his general condition, owing to the hæmorrhage, was serious. I must observe that it was his particular desire that no one should know of this second attack. He did not wish to be exposed to the world as having again suffered injury to the genital organs. It was not his wish that the *first* attack should have been revealed to the world; he would rather have kept it quiet. But when it was known he thought he might as well speak the truth about it at last and tell who the men were. But had not the police bothered him so much, he would never have done so. He was sorry for the men; they had been punished too heavily. If he had his time to go over again he would not have told about them.

Under these circumstances I thought it advisable to get his permission before removing him to the hospital to inform Mr. Reade, one of the Committee of the hospital and a highly respected solicitor, of the exact nature of the injury. I had to inform him that unless he allowed me to take this course I could not admit him. It was only by this kind of threat, and the fear that he ran imminent risk of his life unless he was removed to the hospital, that he gave me the required permission. He became an in-patient the same day. There was no more hæmorrhage. I removed the pins. The wound gradually cleared of the clots, requiring poulticing, &c. It slowly healed up. During the course of the suppuration I could plainly see the lowest part of the left testis. He remained in the hospital about one month. He never seemed properly to recover his strength. He became an in-patient of more than one hospital, and in November last was in the North Staffordshire Infirmary.

He sent for me again on December 26th, 1881. He was then very anæmic, with slight congestion of lungs and dropsy. I informed his friends he would not live many days. Early in the morning of December 31st, after being much disturbed mentally, he confessed to a farmer and Wesleyan local preacher, named Harrison, that the two men Johnson and Clowes were innocent of the crime for which they were punished, and he wished them to be liberated. A few hours after signing this confession in presence of his mother and brother, who appeared greatly astonished at it, he died. To the hospital authorities, and to the police, he would never vouchsafe the slightest information. He never would say whether he had any idea of the identity of any of the men who attacked him. He was in the habit of denying, when asked, that any second injury had occurred to him.

He had an illegitimate child living with him, of which he was the father. The mother of this child died eight years ago, and was a sister of the defendant in the assize trial Clowes. Brooks was fondly attached to the child, but it was advanced at the trial that Brooks' connexion with Clowes' sister might be the motive for Clowes' planning and carrying out the outrage on Brooks as a sort of revenge.

The possibility of the injuries being self-inflicted has been made a strong point in the case, therefore I have been the more particular in describing the man himself.

P.S.—It may be well to add that the Home Secretary sent a special legal commissioner down to Congleton, who has examined witnesses.

HEALTH OF CYPRUS.

THE report of Her Majesty's High Commissioner for the Island of Cyprus for 1880, which has just been published as a parliamentary paper, furnishes some interesting information on the subject of the health of the island and its sanitary condition. The medical service appears to have been in a transition state during the year, a sanitary commissioner having been appointed, under whom a civil medical department has been organised. Dr. Barry, the first head of that service, in his report on the state of the public health during the year, points out some of the difficulties which have arisen from this cause in the way of procuring full and accurate information, but trusts that the steps which have now been taken will remedy these defects in future. The troops are stated to have been very healthy, and the death-rate among them much under that of infantry serving at home. The health of the English civil officials has also been excellent. The native population has remained free from epidemics of any kind, and the fever of malarious origin, which prevails in the summer and autumn, was of a very mild type. The only exception to this favourable health condition was in a Maltese colony at Daouti, numbering forty-three persons, almost all of whom were sick, and four died; but this was to a great extent due to their settling in a marshy, unhealthy spot, quite unfit for the purpose, and it is stated by the district medical officer that "the want of nursing and the lamentable ignorance and filthiness of the Maltese were powerful factors in the sum of the calamity." The only statistics of mortality given in the report are for the districts of Larnaca, where, in a population of 12,466, there were recorded 394 births and 217 deaths, being respectively in the proportion of 31·6 and 17·4 per 1000 living, a very satisfactory result if the registration includes all the births and deaths. The mortality in the Nicosia district is stated to have been 22·14 per 1000 of population. There are two civil hospitals in the island, one at Larnaca, and the other at Limassol. In the former the cubic space to each patient amounts to 1500 feet; in the latter it is only 612. In these hospitals 436 cases were treated, of which 9 died, or nearly two per cent. Only 14 of the cases, including two fatal, were females. If the prevailing diseases of the island may be judged from those included in the returns of hospitals and gaols, they would seem to be paroxysmal fevers, ophthalmia, gonorrhœa, syphilis, rheumatism, skin diseases, and those of the respiratory organs. The health of the prisoners in the gaols is stated to have been good, the mean sick ranging from 1·04 per cent. at Famagusta to 4·50 per cent. at Kyrenia. The average number in confinement during the year is not stated; we are unable, therefore, to calculate the proportion of cases and deaths to number living; but it is worthy of note that of 714 sick prisoners, 142 were recorded as having "no appreciable disease," probably cases of malingering. This very high proportion is deserving of careful watching alike by the medical officers and the governors of the gaols. There is in the island a leper farm, where from forty to fifty lepers are located. The sanitary commissioner states that instead of being confined to the farm, the lepers were found at every fair and public gathering begging, the amount allowed by Government for their maintenance being insufficient for the purpose. An additional sum has since been appropriated for them, and steps taken to prevent their leaving the village. It is stated

that "the popular cause assigned for the disease is the eating of putrid salt pork, that being a favourite article of diet in some villages. The matter, however, required further investigation." Although a good deal has been effected in the way of sanitary improvement, especially in the houses inhabited by the English, in the prisons, and in the barracks, yet the description given of the condition of the towns shows how much remains to be done before they can be expected to be even moderately healthy. The few rubble and earth drains which exist are choked with black fetid deposit. "Slop water is either thrown out into the streets or into the privy cesspit; kitchen sullage and refuse and the drainage of stables are frequently passed into the courtyard or garden of the house, in which is also often collected all the filth from goats, cattle, horses, and other animals." Cesspit privies are in general use, and are never cleansed; when full they are covered with earth, and new ones dug. "Around old houses the ground is regularly honeycombed with them." It is stated that in Nicosia alone there are over 2250 in actual use. The houses of the poor are mere mud hovels, usually very dirty and without the slightest attempt at ventilation; on the contrary, at night the doors and windows are stuffed up to exclude the dreaded night air. In many of the towns and villages large numbers of cattle, mules, goats, and sheep are kept in the houses, and often in rooms communicating directly with those used by the family. "Long habit," says Dr. Barry, "prevents the people, even of the better class, from seeing anything disgusting in living, sleeping, and cooking their food in atmospheres contaminated with their own excrement, or in drinking water from wells sunk in close proximity to cesspits." Under such conditions it is remarkable that there is not a constant and widespread prevalence of zymotic diseases of a formidable character. The water-supply is partly from wells at a distance, the water being conveyed by means of aqueducts lined with cement and distributed by earthenware pipes; and partly also from wells sunk in the subsoil and rarely lined with masonry, covered in some cases with loose boards, but for the most part unprotected. "The wells are very frequently situated in the courtyard or gardens, and in these cases are almost invariably in close proximity to the deep unwalled cesspits of the privy." To remedy such a condition of matters will naturally require time; but it is satisfactory to know that the authorities are awake to the importance of and necessity for great changes in the interest of the public health. Good work has already been done, and some is now in progress, in the way of repairing the aqueducts and taking measures to prevent the contamination of the water on its passage to the towns; in opening up roads throughout the country, in improving the prisons and hospitals, in efficiently carrying out vaccination, in the drainage of the marshes in some of the unhealthy spots in the island, and in the replanting of the forests. Dr. Barry is entitled to credit for the manner in which he has organised the department of which he is the head and has brought to the notice of the higher authorities the sanitary requirements of the island, and the mode in which these should be met. We sincerely trust that his labours and those of the district officers under him may be productive of satisfactory results, and that in the next report which he makes he may be able to show a marked improvement in the health and social condition of the people.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Deputy Surgeon-General Richard Gilborne to be Surgeon-General, vice G. A. F. Shelton, Supernumerary to the Establishment; Deputy Surgeon-General John Sheldon Furlong, M.D., to be Surgeon-General, vice J. A. W. Thompson, M.D., granted retired pay; Brigade Surgeon John By Cole Reade to be Deputy Surgeon-General, vice R. Gilborne; Brigade Surgeon Edward Malcolm Sinclair, M.D., to be Deputy Surgeon-General, vice J. S. Furlong, M.D.; Surgeon-Major Samuel Fuller, to be Brigade Surgeon, vice H. J. Rose, granted retired pay; Surgeon-Major Julius Wiles to be Brigade Surgeon, vice W. L. Farmer, granted retired pay; Surgeon-Major Thomas Norton Hoysted to be Brigade Surgeon, vice J. B. C. Reade; Surgeon-Major Edmund Humphrey Roberts to be Brigade Surgeon, vice E. M. Sinclair, M.D.; Brigade Surgeon John Sparrow has been granted retired pay, with the honorary rank of Deputy Surgeon-General; Surgeon-Major Thomas Bassett Reid has been granted retired pay, with the honorary rank of Brigade Surgeon; Surgeon-Major Francis Henry Macfadin to be granted retired pay.

BENGAL MEDICAL ESTABLISHMENT.—To be Deputy Surgeons-General: Surgeon-Major Charles Planck, Surgeon-Major Henry Walter Bellew, C.S.I.

VOLUNTEER ARTILLERY.—2nd West Riding of Yorkshire Corps: Surgeon Harry Meade is granted the honorary rank of Surgeon-Major.

ADMIRALTY.—The following appointments have been made: Fleet Surgeon James Trimble to the troopship *Jumna*, vice Patrick Keelan, retired.

Correspondence.

"Audi alteram partem."

ON THE NECESSITY FOR THE DISINFECTION OF CLINICAL THERMOMETERS.

To the Editor of THE LANCET.

SIR,—All medical men now carry with them on their daily rounds one or more clinical thermometers; generally but one is carried, and this is used for a variety of dissimilar cases. Commonly the only cleansing which the thermometer receives consists in wiping it with a towel, or more frequently a pocket handkerchief; occasionally the bulb of the instrument is washed in water before being wiped, but even this is insufficient to ensure its being thoroughly freed in all cases from adherent mucus, saliva, or other animal product or secretion. Sometimes the thermometer is merely wiped by the hand, or even returned to its case without any cleansing at all. It is evident that where the temperature is taken in the mouth, and the same thermometer is used for a variety of different cases, some of them of a contagious character, there must be considerable risk of infection, and this even when the instrument has been imperfectly cleansed in any of the ways above alluded to. It is obvious, therefore, that in using clinical thermometers certain precautions ought in all cases to be rigidly adhered to. One very good plan is to leave a thermometer with the patient in every case requiring its daily or continuous use, and thus the employment of the same instrument only for the same case would be ensured. Such a precaution as the above is especially called for in all contagious cases: in typhoid, cholera, diphtheria, syphilis, &c. In those cases where a thermometer is not left with each patient, then special means of ensuring the disinfection of the instruments should be resorted to. Thus, they should be plunged each day after use in some effective disinfectant, such as a strong solution of permanganate of potash or carbolic acid, care being also taken not to use the same thermometer before disinfection in more than one case. Or, since the carrying about of several thermometers is attended with some inconvenience, a bottle—a small phial is sufficient—with the disinfecting liquid should be taken by the medical man on his rounds, so that the single instrument employed might be disinfected immediately after it has been used, and this last proceeding would appear to be the most simple and practical. Similar precautions should be observed in the use of throat brushes. Lastly, sponges should on no account be used for more than one operation, as it is most difficult to ensure the thorough purification of those which have been once imbued with animal matter, more particularly in a state of decomposition, or which have become infested with bacteria.—Your obedient servant,

San Remo, Jan. 1882. ARTHUR HILL HASSALL, M.D.

PHTHISIS AND INFECTION.

To the Editor of THE LANCET.

SIR,—In your last issue Dr. Dale offers some criticisms on my paper on Phthisis as an Infectious Disease published in THE LANCET of November 12th. In investigating this subject, two questions naturally suggest themselves: first, Can tuberculosis be communicated from the diseased to the healthy body? and, second, Is it possible for the disease to be transmitted during intercourse with those affected with consumption? The first has been proved affirmatively by experimental research; but the second can be proved only

by clinical study. Dr. Dale complains of the extreme paucity of cases brought forward by myself and other writers in support of the theory of infection. This is not due to any lack of cases supporting that theory, but to the great difficulty of eliminating every other possible cause, as exposure to cold, insufficient nourishment, hereditary predisposition, &c. The small number of cases adduced is in itself a proof that the subject is being examined in an impartial manner. Indeed, a large portion of my paper was written to show how the system was protected from infection by the action of the cilia in the bronchial tubes. Had I been "haunted by the ghost of infection" I should have found not six, but sixty cases to support my views. I certainly should not have included any instance similar to that mentioned by Dr. Dale in my list, even although all the cases had occurred in the same house, because of the family history of consumption on the father's side. After consumption has once established itself in one member of a family predisposed to tubercular disease, it is, unfortunately, no uncommon thing to find several other members attacked in succession. Yet I am not prepared to say that many of these are not examples of the spread of phthisis by contagion. The tendency of the present time is to regard tubercle as a local infective growth, having various degrees of malignancy, and often arising, like cancer, from purely local and accidental causes. The success which attends the treatment of phthisis by residence in the dry antiseptic air of elevated localities, or by antiseptic inhalation, gives considerable support to this theory. Clinical experience teaches us that the lungs may be infected by the inhalation of poisonous germs. In common with most practitioners I have met with cases which could only be explained in this way, but I will only mention two as they occurred early in my medical career before I had heard of the possibility of tubercular disease being produced by contagion.

CASE 1.—A farmer, aged about fifty, had a portion of his tongue excised for epithelioma in the Aberdeen Royal Infirmary during my house-surgeoncy. The wound took on an unhealthy action and sloughing was produced, accompanied by a very offensive discharge. Soon after the patient had rigors, followed by high temperature, cough, and quickened respiration. Auscultation detected fine moist crepitation over the anterior part of the base of the right lung. The patient died about a week after the commencement of the attack. At the post-mortem examination several gangrenous patches were found in various parts of both lungs. Both Professor Pirrie and Dr. Rodger expressed their opinion that the gangrene was produced by the inhalation of septic matter from the wound.

CASE 2.—A strong, healthy young man, eighteen years old, was employed, during the very hot weather in the summer of 1876, in cleaning out a cesspool in Guildford. The same night he was attacked with violent sickness and diarrhœa. Next evening he had several rigors, and I was called in. He had then a high temperature, with rapid pulse and quick respiration. The third day after he had been working in the cesspool I discovered fine moist crepitation over a small space in the right infra-clavicular region. Acute pneumonia of the upper part of the right lung set in, which quickly went on to gangrene, and the patient was in a very critical state for nearly two months, during which time he expectorated a large quantity of the extremely offensive, dark sputum which is pathognomonic of gangrene of the lungs. He ultimately recovered, with a large cavity in the upper part of the right lung. During the latter part of his illness he was an in-patient in the Royal Surrey County Hospital, under the care of Dr. Morton. That gentleman concurred in the opinion that the gangrene was caused by the inhalation of poisonous germs from the foul atmosphere of the cesspool.

In reference to tuberculosis of the abdominal viscera, it has been proved by experiment that the disease can be produced in the healthy organism by the introduction of tubercular matter into the alimentary canal, although the passage quoted by Dr. Dale referred more particularly to auto-inoculation in cases where there is pre-existing lung disease. A comparison of the lesion seen in those cases with that found in typhoid fever, with regard to the general character of the ulcers, the portions of the bowel affected, and the structures involved, will convince anyone that both are produced in the same manner—namely, by the action of specific germs introduced into the alimentary canal with the ingesta.

I am, Sir, yours truly,

A. M. MCALDOWIE, M.D.

Stoke-on-Trent, Dec. 28th, 1881.

BILHARZIA HÆMATOBIA.

To the Editor of THE LANCET.

SIR,—In reference to Dr. Zancarol's exhibition at the Pathological Society, and the questions that arose on the occasion, as reported in your columns, permit me to state that in the first case under my care both bilharzia ova and larval filariæ were present. The patient was from Natal (1870). In a case of bilharzia in an Englishman, now under observation, I have sought for filariæ both at night and during the day in vain. This patient resided for some years at Alexandria. The concurrence of the two parasites, as confirmed by Dr. N. Moore, is an interesting fact, but we must not attach undue significance to it. In countries like Egypt, where both parasites are prevalent, their accidental association must needs occasionally happen, especially since both are introduced into the body through the same medium. It will not be forgotten that when Wücherer first discovered micro-filariæ in the urine he was actually searching for bilharziæ. Conversely, when I was looking for bilharziæ, I found filariæ. In a case recently reported by M. Chatin (*Ann. des Sciences Nat.*, Sept. 1881), no filariæ were observed. The patient, a lad of seventeen, had also resided at Alexandria. I am, Sir, yours truly,

London, Jan. 10th, 1882. T. SPENCER COBBOLD.

CLUB v. PROVIDENT DISPENSARY: FACTS FOR MR. TIMOTHY HOLMES.

To the Editor of THE LANCET.

SIR,—I felt so overcome by the liberality of the Committee of the Eastbourne Dispensary in offering me £15 per annum to find drugs and dispense for 450 patients that I resigned the appointment. I believe the club patients of my excellent colleagues pay them 5*s.* per member per annum (or 5*s.* 6*d.*). I presume they see their way clear to attend dispensary patients at 2*s.* per member per annum, as per accompanying letter. Are their club patients likely to continue content to give 5*s.* or 5*s.* 6*d.*?—if not, they eventually lose by the step. I cannot prevail on a good chemist to do the dispensing and find drugs for the £15. I recommend the matter to the consideration of Mr. Timothy Holmes, and enclose the letter referred to for insertion.

I am, Sir, yours truly,

Eastbourne, Dec. 13th, 1881. F. MARSDIN.

"64, Pevensey-road, Eastbourne, Nov. 22nd, 1881.

"DEAR SIR (Eastbourne Provident Dispensary),—I am directed to inform you that the Dispensary Committee have, after much consideration, come to the following two resolutions:—1st. That on and after the 1st of January, 1882, all the medical officers be called upon to receive at their own houses (instead of at the Dispensary) all the patients requiring attention, and there also (instead of at a druggist's) to supply all the medicines; and, secondly, that from the above date the remuneration to all the medical officers shall be 2*s.* per member per annum, plus the same payment as at present for each midwifery case, whatever be the numbers.

"Upon your (about) 450 members, your remuneration under this new arrangement (if we look at our 1880 accounts) would be about £45, plus £24 for midwifery cases, making in all £69 instead of £54; in other words, as much as in 1880 with an addition of £15 for medicines for the Old Town patients, and if (as seems probable), the number of members constantly increases, of course your remuneration will increase *pari passu*.

"Messrs. Habgood and McQueen have assented to the above new arrangement for their districts, and my Committee will be glad to receive your assent to it for your district before the 26th instant.

"I am, dear Sir, yours faithfully,

"Dr. Marsdin. "HY. M. EMARY, Sec.

"P.S.—The Committee wish to know also whether it would be agreeable to you to receive the patients (at an hour to be now fixed by you) every day in the week except Sunday, instead of only on Tuesdays and Fridays. This would of course be desirable for the patients, and, probably, more convenient to you than overcrowding you on the two days. If you consent to this change, please to add whether you would wish any and what change in the hour."

MISSED LABOUR.

To the Editor of THE LANCET.

SIR,—I have just read THE LANCET, giving an account of missed labour.

In the month of February, 1874, an elderly female, the mother of several children, came from the country stating that she had past her labour period three months. A medical man had called upon her at that time, but the labour pains had passed away. She had an abdominal tumour very hard, unlike the feel of pregnancy. At first it was supposed to be a hard cancer. On examination per vaginam, a small uterine aperture was detected. A sound was introduced through the opening, and an offensive discharge led to further examination. After some days the part yielded so as to admit the point of the finger, when a hard bony object was felt. The uterus was notched and further dilated until the point of a perforator was used against the bony matter. This having been determined to be a fœtal skull, a craniotomy forceps was fastened on it. That night I was unable to extract the fœtus for fear of lacerating the uterus dangerously, so left the forceps on and went home. On my visiting the patient the following morning, the nurse told me all had passed in the night, including the after-birth. The mass had such a bad smell that it had been buried in the garden. I had it dug up, and found the bones of a fœtus covered with skin and soft brownish decayed flesh, most offensive indeed. The mother made a good recovery and lives to this day, but has no further family.

Missed labour happens to sheep. The proprietor of a station in the interior once killed a ewe for me to see what the shearers call "stone in the belly." The tumour consisted of the bones of a fœtal lamb with the wool. I brought the specimen to our Brisbane Museum. There were several sheep on the run suffering in the same way: they produced no lambs.

A word on craniotomy. At the sale of a deceased practitioner's instruments I purchased, among other things, a trephine for perforating in craniotomy. It is marked "Dotzert Frankfurt," and is a brass tube a foot long containing a trephine on a long central iron rod. I have used this instrument, perhaps, a dozen times, and it works so satisfactorily in making a clear aperture into the fœtal head that I wonder it has not come into general use in British midwifery. I showed the instrument to Mr. Mayer, of the firm of Mayer and Meltzer, when on a visit here.

Brisbane, Nov. 1881. JOSEPH BANCROFT, M.D.

THE METROPOLITAN PROVIDENT (CO-OPERATIVE) MEDICAL ASSOCIATION.

To the Editor of THE LANCET.

SIR,—I take the liberty, as one engaged in practic amongst those who have afforded, and can afford, to pay thirty to forty shillings per annum for medical attendance, to state that the present movement is injurious to the interests of the profession. I enclose a handbill for publication which was placed in my letter-box, and beg to enter a protest against such proceedings. I have no family dependent upon me, but if such an institution as this is to succeed it must be at the cost of those of us who have spent many years of their lives in establishing practices by the aid of benefit societies and the well-to-do working classes, amongst whom these handbills have been repeatedly circulated. Old-established medical men in my neighbourhood have held aloof from this venture. It is pretended that benefit to the profession has arisen elsewhere from similar institutions, but it is not proved that benefit has accrued to the profession at large. What with charities, active competition, and gratuitous attendances, we have enough to contend with without having to encounter co-operation.

I am, Sir, yours faithfully,

Jan. 1882. VERAX.

*** Our correspondent encloses a handbill, with the names of Mr. Stansfeld, Sir Charles Trevelyan, and others, offering to all persons medical advice and medicines on the lowest terms, specially to members of sick societies. The bills are evidently meant for indiscriminate and wide circulation.—ED. L.

LEEDS SCHOOL BOARD.

To the Editor of THE LANCET.

SIR,—In an article amongst your Annotations in THE LANCET of Dec. 17th, headed "The Home Secretary and Industrials Schools," you refer to the Leeds School Board Industrial School in terms from which I infer that you are unaware that there is a medical officer connected therewith. My object in troubling you with this communication is to remove the stigma from the Leeds School Board that the omission of such an appointment would justify, and also to place before you certain facts that have come under my knowledge during the two years of my connexion with the school.

Allow me, in the first place, in justice to all concerned, to emphatically deny that there has been any systematic cruelty or starvation practised. On Dec. 19th, 1881, in order to obtain the unbiased statement of each boy, I visited the school, and put to each separately the following questions:—1. Are you comfortable here? 2. Have you ever been thrashed? 3. Did you deserve it? 4. Have you always had enough to eat? 5. Have you ever been subjected to solitary confinement?

Of the 150 boys all replied "Yes" to the first question. About three-fourths said they had been punished by two to four strokes on the hand with a leather strap, chiefly in school, for talking, &c., but acknowledged deserving it. One only said he had been birched (one or two strokes on each occasion) for bed-wetting, and said he did not deserve it, but acknowledged that the frequency of the incontinence diminished under the treatment. Twenty-nine said that they did not get enough to eat; but all acknowledged that they got the same as the rest at the same table. All these lads are well nourished, and many of them are the finest types of health in the school. Seven said that they had been subjected to solitary confinement. No. 1 for two days and one night for running away after general misconduct. No. 2 for nearly three days for stealing marbles, after general misconduct. No. 3 for three hours for running away after stealing keys. Nos. 4 and 5, brothers, confined together for twenty-four hours for running away. No. 6 for two nights for running away. No. 7 for a few hours for running away. All acknowledged having their meals brought to them regularly and in sufficient quantity, and having a rug to sleep in. The room in which they were confined is the bath-room, 12 ft. long, 6 ft. wide, 11½ ft. high. A window 6 ft. by 4 ft. occupies the upper portion of one end wall, and receives its light from an adjoining well-lighted room. There was sufficient light for me to make my measurements and note down the result late in the afternoon of a dull December day. A ventilator, fourteen inches square, in the ceiling communicates with the false roof.

In conclusion, I will only state that, from my inspection, my opinion is that it would be difficult to find in any school of like number, and drafted from like sources, a more happy, contented, and well-nourished community.

I am, Sir, faithfully yours,

JOHN GEO. NEVITT, M.R.C.S. Lond.

Chapel Allerton, near Leeds, Dec. 30th, 1881.

CASE OF SHORTENED CORD PRODUCING INVERSION OF THE UTERUS.

To the Editor of THE LANCET.

SIR,—On reading this case, reported by Dr. Leach in THE LANCET of December 24th, I was reminded of a case which occurred in my practice about four years ago. The patient was the wife of a coachman, thirty-two years of age, primipara, delicate, and of a nervous temperament. I was first called at six A.M. On making an examination I found labour had hardly commenced, so returned home, and called again about eleven A.M., the os was then dilating, and everything was satisfactory. I directed the nurse to send for me as soon as she considered it necessary. About four P.M. I received the summons, and went at once. When in the act of taking off my overcoat the woman had a very strong pain, of a spasmodic character, and the child was (if I may so express it) shot into the world. I separated it, and was proceeding to remove the placenta, when I found a large

hard mass protruding through the labia. On examination it was not difficult to decide what it was—the placenta very firmly adherent to the fundus of the inverted uterus. On this occasion, by the sense of sight, instead of, as on many former occasions, by the sense of touch, I separated the placenta, and a difficult matter I found it; the surfaces were grown together, and there was no hæmorrhage. I returned the inverted uterus into the vagina, hoping, with the help of chloroform and by continued pressure, to get it right, but failed to alter it. From the first the uterus was firmly contracted and as hard as a cricket-ball. The cord was eight inches long, not in any way round the child. The poor woman died four hours after delivery, in spite of everything I could do for her.

It was quite evident, in this case, the cause of inversion was the drag on the fundus of the uterus before its final contraction, by means of the short cord on the firmly adherent placenta.

The question I wish to ask is this, Could more be done in a case of this description than give chloroform, apply continued pressure, and support the patient in every way possible?—I am, Sir, yours truly,

JAMES COLLYER, L.R.C.P. Lond.

Oak House, Enfield, 30th December, 1881.

ON THE TRANSPLANTATION OF SKIN-FLAPS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of the 7th inst. there is published a report of "an interesting case just now under observation at Moorfields Royal London Ophthalmic Hospital, under the care of Mr. G. Lawson, in which he excised a piece of skin half an inch long and a quarter of an inch wide from the forearm of a patient and transplanted it to the upper eyelid to cure an ectropion caused by a burn." It is further stated in the report that "the plan of the operation was the same as that originally adopted by Mr. Lawson in a similar case in the year 1870, and reported in the Transactions of the Clinical Society for that year;" and still further, that I practised the same operation in 1875.

I have therefore to say that the operation of blepharoplasty which I introduced in 1875, and which has been acknowledged as my operation and adopted by the profession on the Continents of Europe and America, differs from that proposed by Mr. Lawson both in principle and practice. Its distinguishing feature is that by it a large skin-flap may be cut to shape and so prepared as to secure its vitality and incorporation with the tissues of its new site. Mr. Lawson, on the other hand, in the Transactions already referred to, reported a case in which he had transplanted two pieces of skin, one the size of a threepenny-piece and the other that of a fourpenny-piece, by simply cutting them out with a pair of scissors and putting them upon the raw surface. Such small grafts may, under certain circumstances, which I need not specify here, maintain their vitality; but these circumstances are comparatively rare, and no one can seriously recommend to the profession as an operative procedure of general application the cutting out of bits of skin and putting them in new sites to take their chance there. As a proof of this I need only refer to the fact that in his manual on Diseases of the Eye (second edition, 1874) Mr. Lawson never mentions the transference of skin-flaps from distant parts, but recommends "borrowing of skin from the neighbouring parts" (face, forehead, &c.). If subsequent trials had convinced him of the possibility of the method now reported for a second time, he would surely have recommended it in his text-book, or at least alluded to it, instead of passing it over in silence.

I feel very much gratified that the operation which I have introduced has, after receiving due recognition from the surgeons of different countries, now reached the stage when claims of priority are put forth in favour of an eminent *confrère*. I am, however, convinced that he himself would not lay claim to an operation which differs essentially from his own. I am, Sir, yours faithfully,

Glasgow, Jan 9th, 1882. J. R. WOLFE, M.D., &c.

* Though we insert Dr. Wolfe's letter, we fail to recognise the difference "in principle and practice" between Mr. Lawson's procedure and his own to which our correspondent refers.—ED. L.

Obituary.

JOHN FLINT SOUTH, F.R.C.S. ENG.

OLD Guy's and St. Thomas's men, and indeed the profession generally, will regret to hear that this venerable member of our profession died on Sunday last at his residence, Blackheath-park, in the eighty-fifth year of his age. Mr. South was the son of a well-known apothecary in Lant-street, Borough, of whom so high an opinion was entertained by the profession, that the physicians and surgeons in attendance on the Right Hon. William Pitt in his last illness did not hesitate to call him in consultation, when he administered what he called his *elixir vitæ*. So gratifying was the first effect that the nation was in hopes the Minister's valuable life would be prolonged, but two days after he succumbed. Mr. South received an excellent preliminary education. He spoke French and German fluently, and was so proficient in classical scholarship that for many years, when a member of the Council of the College of Surgeons, he was selected to examine the articled students in Latin prior to their being apprenticed to the College.

On the completion of his preliminary education, he was apprenticed at the College to Mr. Henry Cline, jun., who received with him the usual fee of 500 guineas, to board and lodge out of the house, the premium for a resident pupil to a hospital surgeon being 1000 guineas. This generally secured in due course an appointment on the surgical staff, to which so many anxiously looked forward. Pursuing his studies with diligence, Mr. South became a great favourite with his teachers, and, offering himself for examination for the membership of the College, was admitted August 6th, 1819. On the new charter being granted to the College, he was one of the first three hundred to be admitted an honorary Fellow. After passing his examination, he visited and remained some time in France, Germany, and Sweden, where he made hosts of friends, as Eckstram, Retzius, Purkinje. Some few of his foreign friends at the recent International Congress visited him at his hospitable residence at Blackheath-park.

On returning to England he became attached to St. Thomas's Hospital as demonstrator, then lecturer on surgery, and ultimately junior surgeon. Whilst waiting for practice in Adelaide-place, London-bridge, he devoted himself to literary pursuits, publishing a text-book on the bones, and translating with notes Otto's "Compendium of Human and Comparative Pathological Anatomy"—Chelius' "System of Surgery," with copious and valuable notes, in two thick 8vo volumes. In the College of Surgeons, of the Council of which he was elected a member in 1841 with Mr. J. M. Arnott, who still survives, he ever took the greatest interest, serving faithfully and zealously on all boards, courts, and committees. In 1844 he delivered the Hunterian Oration, in which, curiously enough, little or nothing was said of John Hunter; this, he told the writer, he should reserve for a second oration. The following year he was appointed Arris and Gale Professor of Human Anatomy and Surgery; in 1849 he was elected, with Mr. Cæsar H. Hawkins, who survives him, a member of the Court of Examiners, and as such was considered very severe, with strong and deep-rooted prejudices: yet so great was the interest he took in his work that he kept a full account of the examination of every candidate at his table. These descriptions were bound, and presented to the College. In 1851 he obtained the highest honour his colleagues could offer him, that of President, which office he again received from them in 1860. Mr. South was a member of many learned Societies at home and abroad, especially in Stockholm, where he obtained, through the interest of his friend Retzius, the large medal for introducing our well-known vegetable marrow. He never contributed anything to the medical journals, having, as he often expressed it, a great horror of those "editor chaps," especially those "sharp LANCET fellows."

The deceased gentleman was twice married. By the first wife he leaves one son (a clergyman) and a daughter; by his second wife he leaves two daughters.

To those who did not know him well he might appear a little brusque, but he was ever a good and firm friend. His later years were spent in writing an exhaustive history of

the College of Surgeons, which ultimately became a history of the profession, and another of St. Thomas's Hospital. It was through the untiring zeal of Mr. South that the remains of John Hunter, discovered by Mr. F. T. Buckland in the vaults of St. Martin's-in-the-Fields, were re-interred in Westminster Abbey with great pomp, and the inscription on the tablet marking the place was from his pen.

SAMUEL BIRCH BUCKNILL, M.D. EDIN.

DR. BUCKNILL was an old resident of Rugby as well as the senior medical man in the town. A short time since he was incapacitated from his professional duties for a while. He, however, recovered from this, and was able to resume at least a portion of his practice. On the 6th ult. he was seized with paralysis, under which he gradually sank, despite the care of Dr. Clement Dukes, and his brother, Mr. Henry Bucknill, and expired on the following Saturday. Dr. Bucknill was born in 1815, was educated at Rugby School, and, after obtaining his M.D. degree at the University of Edinburgh, commenced practice in partnership with his father about 1840. Soon afterwards he was appointed physician to Rugby Hospital, a post he held till advancing years incapacitated him for arduous professional work, when he was elected consulting physician to the institution. Dr. Bucknill was not by any means a public man. This was particularly seen in connexion with the Volunteer Rifle Corps, which he joined in 1860, and of which he was an ardent lover. He persistently refused promotion, and to the last remained a full private. Soon after commencing his professional life he became an Oddfellow, and was surgeon to several Oddfellows' lodges and friendly societies.

ROYAL COLLEGE OF SURGEONS.

AT a quarterly meeting of the Royal College of Surgeons, held on Thursday last, Mr. Spencer Wells was appointed to deliver the Hunterian Oration in February next year. Mr. F. G. Hallett was appointed Assistant-Secretary to the College. The second part of the Catalogue of Osteology of the Vertebrata was ordered to be printed. An interesting donation by Mr. Charles Hawkins of a collection of instruments illustrating the history of operations for the removal of stone from the bladder without cutting was received and acknowledged with thanks. Five dissertations on the Pathology and Surgical Treatment of Diseases of the Hip-joint were received for the Jacksonian Prize. Three notices of motion were given, by Mr. Heath, Mr. Gay, and Mr. Lund respectively: that by Mr. Heath relating to the admission of candidates for the professional part of the examination for the membership; Mr. Gay's notice of motion having reference to the election of members of the Board of Examiners. The fourth report of the committee on the arrangements necessary for the institution of additional examinations for the diplomas of Member and Fellow was received and adopted. The committee did not recommend any alteration in the curricula of professional education for the Membership and Fellowship. In reference to the resolution of the General Medical Council of the 30th April last respecting the establishment of a Preliminary Scientific Examination, it was thought desirable that such examination should be passed before the commencement of the purely medical curriculum, so as to avoid any curtailment of the present too limited period of four years now required for professional study.

Probably there will be no meeting of the Council in February, so that the notices of motion above referred to will not be considered until the meeting in March.

THE SICK POOR OF LONDON.—By the sanction of Mr. Edmund Boulnois, chairman of the St. Marylebone guardians, lectures will be given to the Nightingale staff of nurses at the St. Marylebone Poor Law Infirmary, Nottinghill, by Dr. Lunn and Dr. Percy Potter, lecturer to the St. John Ambulance Society, on the outlines of physiology, the principles of ventilation, and other like subjects, a knowledge of which on the part of nurses will be likely to enhance the comfort of the sick.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of during the last and the present weeks:—

George A. P. Little, Harold L. Cummings, Bingley G. Pullin, Charles E. Morris, Arthur Trower, F. Freeman, O. P. Brown, H. E. Powell, C. Alsop, H. F. Jackson, Vincent H. Harcourt, Alfred M. Page, Arthur E. Lyster, Edward Morris, and F. H. Preston, St. Bartholomew's Hospital; Thos. B. Jacobson, John W. Harris, L. F. Childe, G. E. Palmer, Arthur E. Price, George P. Wornum, Arthur A. Joyes, Harry St. G. S. Hore, Geo. H. H. Fuller, and R. A. Bindley, Guy's Hospital; Arthur Roberts, Robert W. Bateman, George A. L. Bowling, and A. C. Waters, London Hospital; Elsey F. Ross, Rowland Hill, John S. H. Roberts, J. Morton, Fredk. M. Holman, Geo. S. Gent, Arthur W. Howard, R. W. Eustace, and H. G. Shaw, University College; Malcolm A. Nicholson, Toronto; John B. Graham, Belfast and University College; Harry Colman, Charing-cross Hospital; James Swain and Walter G. Axford, Westminster Hospital; Jas. R. Colyer, Augustus H. Dubourg, and L. B. Diplock, St. George's Hospital; F. W. S. Le Maistre, F. J. Freeland, Henry E. Shadwell, Charles M. Wigram-Castle, A. T. Field, and W. A. A. Chevers, King's College; Henry W. W. Aubrey, Bristol; William Thorburn and William S. Pratt, Owens College; Charles H. Mather, Dublin; J. N. Mitra, Calcutta; Thos. W. Bullock, Sidney Plowman, Charles W. J. B. Bell, and Charles N. Foley, St. Thomas's Hospital; F. R. B. Bishopp, Cambridge and Guy's Hospital; P. L. de Montbrun, J. P. S. Hayes, and S. G. Allen, St. Mary's Hospital; J. E. E. Jones, V. H. W. Wingrave, and R. S. Bowker, Middlesex Hospital. W. J. V. Rowe, Dublin and St. Thomas's Hospital.

[In the list of gentlemen who passed the Primary Examination on the 2nd inst., for "R. F. T. Perkins" read "R. F. T. Perkin."]

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Jan. 5th:—

Roberts, Thomas, Tredegar-road, Bow.
Stephens, Lockhart Edward Walker, Emsworth, Hants.

MR. CHARLES MOTT, late medical officer of the Walton District of the Chertsey Union, has obtained a superannuation allowance of £40 a year.

DONATIONS.—Sir Edward Coey has given £525, and Mr. Joseph Richardson £50, to the funds of the Belfast Royal Hospital.

THE new wing and chapel added to the Margate Sea-bathing Infirmary by Sir Erasmus Wilson will, it is stated, shortly be opened by the Prince and Princess of Wales.

ST. BARTHOLOMEW'S HOSPITAL.—We understand that Messrs. Dunn and Soman have, by order of Sir Sydney H. Waterlow, M.P., purchased for St. Bartholomew's Hospital fifteen acres of land at Swanley for the erection of a convalescent home.

THE tenth Hospital Sunday collection was made in the places of public worship in Liverpool on the 8th inst. The weather was unfavourable, and it is feared that this fact will necessarily affect the amount raised. Last year the sum of £10,027 was collected on Hospital Sunday.

THE committee of the Religious Tract Society have just sent a parcel of Christmas and New Year's cards to hospitals and infirmaries in almost every county in the United Kingdom, and also to a large number of workhouses, asylums, and charitable institutions in London and the provinces.

CHELSEA HOSPITAL FOR WOMEN.—Prince Leopold (Duke of Albany) has become the patron of this hospital, and the Princess Frederica of Hanover, the Duchess of Cambridge, and the Princess Mary of Teck have given permission for their names to be added to the patronesses of the institution.

ON the 7th inst. some of the Christmas decorations in the Albert ward of the Royal United Hospital, Bath, caught fire through coming in contact with a gaslight. Considerable alarm prevailed among the patients, as the flames seemed at one time in danger of spreading. They were, however, promptly extinguished by the officials.

AS additional accommodation is urgently required at the Gloucester County Lunatic Asylum, it has been resolved to proceed at once with the erection of the whole of the central official block of the new building and its dependencies, the two infirmary blocks, and the workshop block. This will effect an increase of about 300 beds.

DEVONSHIRE HOSPITAL, BUXTON.—By the report of the Committee of Management of this institution for 1881, it appears that 1394 in-patients were admitted during the year, whilst the number of out-patients was 250. Of the former, 1248 were discharged improved, 90 without improvement, and 3 died. At this hospital the system is adopted of giving to every in-patient on leaving the house a form printed on a post-card, to be returned at the end of six weeks, with a statement of the result of the treatment received. During the eight years in which this plan has been in use 8759 such cards have been returned, 6357 of them bearing the word "improved," in 2358 cases the recipient was "no better," and in 44 the patient had died.

CHRISTMAS AT THE WESTMINSTER HOSPITAL.—During the Christmas week tea was given to the patients in their wards by several of the lady visitors; and in one ward a handsome Christmas tree was also presented. On Wednesday last some of the students, assisted by their friends, gave an admirable musical and dramatic entertainment in the board-room to all the patients who could be moved from the wards. Some of the choristers from the Abbey and Mrs. Maitland aided in the musical part. The farce "Painless Dentistry" wasexcellently acted, and caused intense amusement. The whole arrangements were evidently carried out with the simple aim of giving pleasure to the patients, who showed their appreciation in a very cordial manner.

MANCHESTER MEDICAL SOCIETY.—At the annual meeting of this Society, held at the Owens College, January 11th, the following office-bearers were elected for 1882:—President: Mr. Edward Lund. Vice-Presidents: Drs. John Broadbent, Arthur Gamgee, James Hardie, George Stevenson. Treasurer: Dr. David Little. Secretary: Dr. Charles James Cullingworth. Other Members of Committee: Mr. John Augustus Ball, Dr. Julius Dreschfeld, Dr. Charles Edward Glascott, Mr. Francis Hepworth, Mr. Thomas Jones, Dr. Daniel John Leech, Dr. John Dixon Mann, Dr. Siegmund Moritz, Mr. George William Mould, Dr. James Ross, Mr. Henry Merrill Williamson, Dr. William Yeats. The above, with the past presidents of the Society and two representatives of the Council of the Owens College, form the committee.

LIVERPOOL MEDICAL INSTITUTION. — The list of officers and Council for the ensuing year adopted at the annual meeting on Jan. 10th, 1882, is as follows. (The asterisk relates to newly elected members.) President: T. Shadford Walker.* Vice-Presidents: Robert Gee, Benj. Townson, Edgar A. Browne,* Henry G. Rawdon.* Hon. Treasurer: W. Macfie Campbell. Hon. Gen. Secretary: Rushton Parker. Hon. Secretary to Ordinary Meetings: Frank T. Paul.* Hon. Librarian: J. M. Howie. Council: J. E. Burton, D. Dunlop Costine, J. N. Cregeen, J. Sibley Hicks, Arthur E. Hopper, Alexander Dunbar,* James Lambert,* E. Mason Sheldon,* J. Kellett Smith,* Samuel Spratley,* John H. Wilson,* Arthur Wiglesworth.* Microscopical Committee: William Alexander, F. M. Braidwood, Hy. Briggs, T. R. Glynn, Karl Grossmann, J. Sibley Hicks, John Newton, Rushton Parker, William R. Parker,* Frank T. Paul, W. Whitford,* Wm. Williams.

PRESENTATIONS.—A largely attended meeting of students (past and present) and staff of the Adelaide Hospital, Dublin, took place on the evening of December 23rd last, Dr. Head, senior physician to the hospital, in the chair, the occasion being to present Dr. W. G. Smith, F.K.Q.C.P.I., Regius Professor of Materia Medica and Pharmacy in the University of Dublin, late physician and pathologist to the hospital, with a clock and illuminated address from the past and present students of the hospital, on his leaving them to undertake the duties of professor in the School of Physic and physician to Sir P. Dun's Hospital. The address, which was numerously signed, bears a beautiful water-colour painting of the hospital, and the clock is a fine specimen of workmanship, upon which is a suitable inscription. The nurses having presented him with a handsome table-requisite, and appropriate speeches having been made, Dr. Smith expressed his gratification and thanks, and a pleasant conversazione terminated a delightful evening.——The Persian Ambassador has presented to Dr. Vincent Ambler, physician to the Embassy, in the shape of a New Year's gift, a very valuable gold chronometer, as a souvenir in recognition of his medical services to the Prince Malcolm Khan and his suite. Dr. Ambler has already been created a Knight of the Order of the Lion and Sun by the Shah of Persia.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BELL, G. PEARSON, M.D., C.M.Aber., M.R.C.S., has been appointed Medical Officer for the First District of the Petersfield Union.

DEATH, ROBERT, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Borough and Union of Buckingham.

DRUMMOND, JAMES, M.D., C.M.Glas., has been appointed Medical Officer for the Westhoe District of the South Shields Union.

DUTTON, THOMAS, M.B.Durh., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Manhood District of the Westhampnett Union.

FLEMING, CHRISTOPHER, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Worksop District of the Worksop Union.

FOSTER, WILLIAM, F.C.S., has been appointed Public Analyst for the Borough of Monmouth.

HARRINGTON, MR. W. B., has been appointed Public Analyst for the City of Cork.

HUNTLEY, ROBERT ELLIOTT, M.D.St. And., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Willington Quay Urban Sanitary District, Northumberland.

LEAHY, ALBERT WM. DENIS, F.R.C.S.E., has been appointed Surgical Registrar to the Charing-cross Hospital, vice Whitehead, F.R.C.S.E., appointed an Assistant Surgeon.

LEITCH, JOHN, M.B., C.M.Edin., has been reappointed Medical Officer of Health for the Holme-Cultram Urban Sanitary District, Cumberland.

LUCAS, HERBERT, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Godmanchester Urban Sanitary District.

NOWELL, WILLIAM, M.R.C.S., L.S.A.Lond., has been appointed Consulting Surgeon to the Halifax Infirmary.

PIGGOTT, EDWARD A., L.R.C.P.Ed., L.R.C.S.Ed., L.M., L.S.A.Lond., has been appointed Medical Officer and Public Vaccinator to the Second District of the Risbridge Union, vice Jno. F. V. Bent, M.D. resigned.

STONE, ARTHUR W., M.R.C.S., L.S.A.Lond., has been appointed Junior House-Surgeon to the Royal Albert Edward Infirmary and Dispensary, Wigan, vice J. A. Webster, appointed Senior House-Surgeon.

TERRY, CHARLES, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the First District of the Newport Pagnell Union.

WARRILLOW, E. S., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Worksop Urban Sanitary District.

WATTERS, GEORGE T. B., M.D., has been appointed Medical Officer and Public Vaccinator for the Stonehouse District of the Stroud Union, and Medical Officer and Public Vaccinator and Medical Officer of Health for the Haresfield District of the Whestenhurst Union, vice D. W. Eshelby, M.D., resigned.

WEBSTER, JOHN ARTHUR, M.R.C.S., L.S.A.Lond., has been appointed Senior House-Surgeon to the Royal Albert Edward Infirmary and Dispensary, Wigan, vice Joshua Lytle, M.D., resigned.

WYKES, EDWIN, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Eastham District of the Wirral Union.

Births, Marriages, and Deaths.

BIRTHS.

AVELING.—On the 6th inst., at Portland-place, Lower Clapton, the wife of Charles T. Aveling, M.D., of a son.

KLEIN.—On the 9th inst., at Philbeach-gardens, Earl's Court, S.W., the wife of Dr. E. Klein, F.R.S., of a son.

NESBITT.—On the 3rd inst., at Cambridge-place, Hyde-park, the wife of Dawson Nesbitt, M.D., of a daughter.

DEATHS.

BAIRD.—At Dover, Andrew Wood Baird, M.D.Ed., Physician to the Dover Hospital.

EDGCOMBE.—On the 10th inst., at Upper Norwood, James Edgcombe, M.D. St. And., aged 76.

HALLOWES.—On the 4th inst., at Canterbury, Price Blackwood Hallowes, F.R.C.S.E., in his 81st year.

OUGHTON.—On the 21st ult., at Kingston Lodge, Prestonville-terrace, Brighton, the Rev. S. Oughton, the beloved father of T. Oughton, Brigade Surgeon, Army Medical Department (H.P.), aged 79.

PURDON.—On the 8th inst., at Belfast, Charles D. Purdon, M.D.Dub., aged 63.

SOUTH.—On the 8th inst., John Flint South, F.R.C.S.E., of Blackheath-park, in his 85th year.

TAYLOR.—On the 7th inst., at St. George, Guernsey, after a few days' illness, Joseph Marmaduke Taylor, Surgeon-Major, late Royal Horse Guards, eldest surviving son of the late Joseph Henry Taylor, Lieutenant 9th Light Infantry, of Hillbrook House, Castleknock, county Dublin, and of Graigue, county Tipperary.

TURNER.—On the 3rd inst., Roger Turner, M.D., of Ashurst, Nightingale-lane, Clapham-common, formerly of Petworth, Sussex, in his 76th year.

WILLIAMSON.—On the 6th inst., at Florence, of typhoid fever, Robert Isherwood Williamson, F.R.C.S., M.A., M.B., and Radcliffe Travelling Fellow in the University of Oxford, elder son of Robert and Elizabeth Williamson, of Sanny Bank, near Ripon, Yorkshire, aged 29.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 5.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Jan. 12th, 1882.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan. 6	29·69	S.W.	52	50	..	50	43	·02	Overcast
,, 7	29·82	W.	42	40	..	46	34	·11	Cloudy
,, 8	30·25	W.	43	41	..	51	37	..	Cloudy
,, 9	30·05	W.	43	41	..	48	39	·52	Fine
,, 10	30·35	W.	39	38	..	50	34	..	Foggy
,, 11	30·19	S.W.	49	47	..	54	36	..	Cloudy
,, 12	30·41	S.W.	45	45	..	52	42	..	Foggy

Medical Diary for the ensuing Week.

Monday, Jan. 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. The Discussion on the Salicylate Treatment of Acute Rheumatism will be resumed. Dr. Broadbent (the President), Dr. Gilbart Smith, and Dr. Douglas Powell will give further statistics.

Tuesday, Jan. 17.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ROYAL INSTITUTION.—3 P.M. Professor John G. M'Kendrick, "On the Mechanism of the Senses."

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. The following specimens will be shown:—Bones from Genu Valgum; Simple Cyst of Liver; Simple Cyst of Cerebellum; Gummata in Spleen; Abscess of Pancreas; Perforation of Large Intestine in Typhoid; Hour-glass Contraction of Stomach; Hereditary Cerebral Sclerosis; Unreduced Dorsal Dislocation of Hip (living specimen); Rupture of Liver; Congenital Xanthelasma (living specimens); Congenital Tumour of Neck.

Wednesday, Jan. 18.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.—Skin Department.—1.45 P.M., and on Saturday at 9.15 A.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, Jan. 19.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

ROYAL INSTITUTION.—3 P.M. Mr. H. N. Moseley, "On Corals."

HARVEIAN SOCIETY.—3 P.M. Election of Officers.—9 P.M. President's Address.—Conversazione.

Friday, Jan. 20.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—9 P.M. Dr. Wm. Huggins, "On Comets."

Saturday, Jan. 21.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor E. Pauer, "On Louis van Beethoven."

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Lectures, original articles, and reports should be written on one side only of the paper.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

COMPARISON OF THE SANITARY CONDITION OF THE GERMAN AND THE FRENCH ARMY.

Machaon (Dublin).—The superiority of the German army over the French in sanitary conditions may be estimated from the fact that out of 1000 men under the colours, Germany has a daily average of but eleven invalids, while France has twenty-five. If the sick days in barracks and the days of treatment in hospital be added together, each French soldier may be regarded as lost to the service seventeen days a year, and each German soldier similarly lost for but thirteen days. The death-rate in the French army is just about double that in the German, where it scarcely reaches five per 1000, while in the French it exceeds nine. But see for further details on this interesting subject an article in the last number of the Berlin *Militar Wochenblatt*.

MEDICAL ADVERTISING.

WE have received this week a more than ordinary number of specimens of handbills and circulars issued by members of the profession in London and the provinces, setting forth the claims of the practitioners whose names they bear to the patronage of the public. To print these productions, as some of our correspondents suggest, would be giving to those who adopt such unscrupulous means of making headway the advantage over their more honourable *confrères*, which is so eagerly coveted. We regret that medical men can be found who are ready to resort to the low arts of the "pushing" tradesman to increase their profits.

Surgeon-Major.—Their names do not appear in the Army List, because they do not belong to the army. They form a special corps for service in India, and their names are to be found in the India List.

THE DOUBLE QUALIFICATION OF EDINBURGH.

To the Editor of THE LANCET.

SIR,—While I have no desire to disparage the double qualification of Edin., as I believe the nation is beginning to learn the real value of each qualification, I have to protest most strongly against the practice which is in vogue in some (let us hope in few) towns—viz., for those who possess the "double" Ed., or merely the L.R.C.P. Ed., to call themselves Drs., and to put Dr. on their door-plate and elsewhere.

Now, to every unprejudiced mind this is nothing else than imposture, inasmuch as they assume a title which their own examiners have again and again declared that they have no right to, and thereby impose upon and delude the public; and I have no doubt that this is one of the causes, and justly so, of so many "assaults" being made on those "who have the honour of holding the double qualification of Edin."

Lately I have had the misfortune of coming to stay in a town (not very small), and I find that most, if not all, who hold the L.R.C.P. Ed. assume the title of Dr., and have it on their door-plates, &c.; and the other day I had the pleasure of reading a pamphlet written by one of these gentlemen, where he refers to one of his friends (an L.R.C.P. Ed.) as Dr., while he takes pains to refer to one of our luminaries (not an L.R.C.P. Ed.) as Mr.

Now, why should these gentlemen assume a title to which they have no right whatever—a title which they are particularly careful not to apply to gentlemen holding a much higher qualification? Cannot something be done to remove this anomaly, and thereby remove a source of much grievance?

I am, Sir, yours, &c.,

Jan. 4th, 1882. NO BOGUS.

ALCOHOL IN LUNATIC ASYLUMS.

IN the report of the Visiting Committee of the County Lunatic Asylum, Wells, presented to the Bath Council meeting held last week, the following sentences occur:—

"The withdrawal of alcoholic liquors from the patients as ordinary beverages has been continued, and with the like good effects as before. A still further reduction in the amount of strong liquor consumed in the asylum is now being made by the gradual withdrawal of liquor rations hitherto supplied to the attendants for casual work."

SCURVY.

IF "Tyro" will refer to me, he will find all he needs.—"Medical Digest," section 57-3.

Toujours en vedette.—1. The individual bodies may combine under the Act of 1858, but it is certain that, apart from Parliamentary compulsion, they will not.—2. In any legislation persons in the position of our correspondent will be sure to be considered, and no changes will be likely to act hardly upon them.—3. It is impossible at present to say in what way this will be secured.—4. There is no certainty as to the time at which the contemplated changes will occur, though it may be hoped that the Report of the Royal Commission will soon be out, and legislation follow thereupon. As to the examination specially referred to, it is not one that ought to survive.

"A CORRECTION."

To the Editor of THE LANCET.

SIR,—I regret to have to ask for even a small portion of your valuable space to answer Dr. Cassells' letter under the above heading in your issue of the 7th instant. But I owe it to myself as responsible for the information given to the writer of the obituary notice of my late son, W. Douglas Hemming, of Bournemouth, and also to his memory, as, by implication at least, his veracity is impugned, not to allow the letter in question to pass unnoticed. I therefore ask your kind permission to state, as shortly as possible, the precise relations which existed between Dr. Cassells and my son in the matter.

In 1878 my son wrote to Professor Politzer requesting permission to undertake the translation of his work on the Ear. Dr. Politzer stated in reply, that he would have entrusted the work to him with pleasure, but that he had already given the permission asked for to his old pupil, Dr. Cassells. Thereupon my son wrote to Dr. Cassells offering his assistance in the performance of the work. This offer was not at first accepted, but some time subsequently, at the meeting of the British Medical Association, at Cork, in 1879, Dr. Cassells, by his own request, was introduced by Mr. Lennox Browne to my son, with the avowed object of obtaining his literary assistance in the translation of Professor Politzer's work. An arrangement was made as to the terms on which this assistance was to be rendered, and, on returning home to Bournemouth, my son received from Dr. Cassells some rough translation, which he was to put into form for the press. In doing this he found it necessary to make some original translation. As this involved a greater amount of work than was contemplated in the agreement made at Cork, a correspondence took place upon the subject; Dr. Cassells paid a special visit to my son at Bournemouth, and a fresh arrangement was entered into upon a different basis. My son then continued the work, and forwarded, from time to time, a considerable amount of manuscript to Dr. Cassells, which, after a lengthened interval, was returned with a letter, to the effect that his further assistance would not be required, as Dr. Cassells hoped to finish the work himself.

I may add that, had his life been spared, my son had the full determination of holding Dr. Cassells to his agreement, and requiring him to fulfil its conditions. Without any intention of entering on a controversial correspondence in your pages, I shall feel obliged for the opportunity of placing the matter on its really correct footing, and remain,

Sir, yours truly, W. B. HEMMING.

Notting-hill-terrace, W., Jan. 10th, 1882.

L.S.A.—The 20th section of the Births and Deaths' Registration Act of 1874 only recognises *registered* medical practitioners as qualified to give a legal medical certificate of the cause of death of a deceased patient for the purposes of that Act. Registrars of births and deaths are therefore necessarily instructed to refuse to accept certificates furnished by *unregistered* practitioners as legal documents. Any such written statements of the cause of death, whether supplied by unregistered or unqualified practitioner, are accepted as part of the information supplied by the ordinary and legal "informant" of the death for registration purposes.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—If Mr. Brown, of Leeds, will refer to THE LANCET of Jan. 22nd, 1881, he will find a letter from me on the above subject, which to some extent corroborates Professor Clay's testimony as to the great value of Chian turpentine in cancer.—I am, Sir, yours, &c.,

H. ARTHUR ALLBUTT, M.R.C.P.E., &c.

Park-square, Leeds, Jan. 4th, 1882.

Glasdo.—Our correspondent's questions should have been addressed to the clerk of his union, and will probably be found fully answered in the instructions for the guidance of medical officers doubtless issued by the Scottish Poor-law authority. In the English practice (1) the medical officer is not called upon to attend a pauper without an order from the relieving officer or other competent Poor-law official; (2) the medical officer has no power to order provisions, stimulants, and other matters not medicinal; (3) the answer to this question must be sought in the Acts relating to the administration of the Poor-law in Scotland.

Mr. Percy Norcop.—Dr. Ewart's paper is not, so far as we are aware, printed; but an abstract of it will presently appear in a report of the Proceedings of the Society.

Dr. James Whitson (Glasgow).—Very shortly.

Clemens.—See THE LANCET, 1862, "Parturition without Pain." No one recommends the forceps in normal labour.

Mr. J. G. Garbutt.—Surely the disclaimer is unnecessary.

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Many of us about to become qualified, who have not the means or influence necessary for successful private practice, naturally turn our attention to the public services. Our navy, with a glorious history, and still supposed to be the most efficient in the world, should be at least as attractive to young medical men as any other service. It is notorious, however, that this is not the case, and a table published in a recent number of the *United Service Gazette* throws a ghastly light on the prospects of the candidate for what ought to be an inviting and honourable service. The table shows that of 120 who became naval medical officers during the 5 years from 1871 to 1875 inclusive, 4 retired on account of ill-health before January 1st, 1881, 8 died on full pay, 18 resigned voluntarily, 1 resigned to avoid court-martial, 6 were tried by court-martial, 11 were dismissed for misconduct, and that the loss to the service during an average period of 7½ years was 42, or 35 per cent. In the army during the same time, amongst 126 who joined, only 1 was dismissed for misconduct, no one was tried by court-martial, 6 died, and 10 resigned, with a loss to the service of only 17, or 13·5 per cent. These statements regarding the navy, if true, and the writer challenges full inquiry as to their accuracy, are simply disgraceful. Something more than the recent Warrant, so far as one can understand its provisions, is necessary to attract even the lowest and most reckless class of medical men to such a service.

I am, Sir, yours, &c.,

Jan. 9th, 1882. A SENIOR MEDICAL STUDENT.

A GRIEVANCE.

To the Editor of THE LANCET.

SIR,—I wish to lay before you a grievance. On applying for a post at a metropolitan hospital I failed to obtain it, and the desired place was given to a M.B., C.M. Glasgow in preference to my M.B., B.S. London. The only reason given was that C.M. was a grade higher than B.S. Now, what is the truth? "C. M." is "given in" with M.B. Glasgow without further examination, whereas B.S. London is a separate degree, obtained by an entirely separate examination, including operations on the dead body. The idea of comparing C.M. Glasgow with M.S. London to those who know the facts is ridiculous, and yet in applying for hospital appointments they are looked upon as equal. For instance, one often reads the gentleman "applying for the post must be either Master in Surgery or F.R.C.S." Fancy a C.M. Glasgow being equal to F.R.C.S. Eng.!

I am, Sir, obediently yours,

London, Dec. 27th, 1881. M.B., B.S. LOND.

Surgeon, &c.—Dr. Pocock, 20, Golborne-road, is the secretary of the association.

M. Erart.—We cannot exchange.

Beacon.—The *e* is short.

ACONITE IN THROAT AFFECTIONS.

To the Editor of THE LANCET.

SIR,—Aconite has been recommended by Ringer to allay local inflammation, especially of throat affections. In the spring of the present year I attended a case of laryngitis, brought on partly by exposure to the weather, and excited by swallowing a capsicum lozenge, which at first threatened suffocation. I had tried several remedies without any improvement, but on the second day of the attack I gave the patient (a lady, aged thirty-two) half a drop dose of tincture of aconite every half hour for twenty-four hours, when a marked improvement in the breathing took place, but delirium set in; but after application of ice to the head it passed off in a few days, and the patient rapidly recovered.

I am, Sir, yours faithfully,

Barmouth, Dec. 27th, 1881. H. LLOYD, L.R.C.P.

NITS IN THE HAIR.

To the Editor of THE LANCET.

SIR,—Can any of the readers of THE LANCET recommend an application effectual for the removal of nits from the hair?

I am, Sir, yours faithfully,

Jan. 9th, 1882. MEDICUS.

DISTRICT MEDICAL OFFICERS IN BRITISH GUIANA.

THE *Argosy*, of Demerara, contains a leading article, very temperately written, exposing some of the grievances under which medical officers of districts lie in British Guiana. We cannot doubt that the governor will see it to be his duty to inquire, or appoint a commission to inquire, into these grievances. It would seem that medical officers can be dismissed at a day's notice by the governor without any appeal. Medical men are not infallible any more than other men. Perhaps in remote dependencies they are apt to have a larger share of fallibility and peccability than at home; but the worst man's case will be none the worse for investigation. And it ought to be remembered that if medical officers are fallible, so are governors and other officials, especially such as have brief sharp authority to deprive other men of their offices. Further, it is complained that supernumeraries are required to take the work of incumbents without receiving the additional pay to which they are fairly entitled, and are, besides, put to much extra expense. We willingly re-echo the complaints of our contemporary, and commend them to the governor of British Guiana as fit subjects for inquiry in the interest alike of the inhabitants and of the medical profession.

THE RESOLUTION OF THE ROYAL COLLEGE OF PHYSICIANS.

To the Editor of THE LANCET.

SIR,—The resolution passed unanimously by the members of the Royal College of Physicians at their meeting on the 27th ult. is one that will meet the approbation of almost all practitioners who think with me that the therapeutic law discovered by Hahnemann is the best that has yet been revealed for our guidance in practice. We—that is, those who think as I do on therapeutic matters—as a rule neither assume nor accept any designation implying the adoption of a special mode of treatment, and indeed most of us have protested in our published writings against the habit that prevails among our colleagues and the public of giving us designations of this character. Still we do not hesitate to express our belief on any opportunity that the homœopathic therapeutic rule is the best, some say the only real therapeutic rule that medicine can offer, and we do our best to impress our views on the medical profession. We have certainly our homœopathic societies, for it is a necessity with us to meet and discuss subjects connected with homœopathy, and such subjects are not allowed to be discussed in the ordinary medical societies. We have our special periodicals, for the same reason. But we assume no such designation as that the College of Physicians objects to, and, like the College, we scorn those who trade on such designations. For the sake of brevity, we allow our adversaries in discussing therapeutic subjects to speak of us who practise homœopathy when the case seems to admit of it, as "homœopaths;" but we do not put this name on our cards, our door-plates, or the books we write.

As regards consultations with those who think differently from us on therapeutic matters, we hold them to be absurd, and quite agree with Sir W. Jenner, that as they can be of no use to the patient, they should not be held. It may be different with respect to consultations for purposes of diagnosis, and as such consultations may be of use to the patient, and there is no reason to suppose there would be any insuperable differences of opinion between the consultants, we do not see why they should not take place if wished by patients.

It was well the College did not adopt Dr. Bucknill's amendment, impeaching the honesty of those who practise homœopathy, for that would have been to calumniate all those members and licentiates of the College who have adopted the homœopathic method from conviction.

I rejoice to think that the meeting of the College, which was expected to pass a severe censure on those who take the liberty to think for themselves and to practise the system they think best for their patients, has resulted in the passing of a resolution to which we can all cordially subscribe. I am, Sir, your obedient servant,

Montagu-square, Jan. 9th, 1882. R. E. DUDGEON.

F. M. S.—A letter addressed to 5, York-buildings, Duke-street, Adelphi, will no doubt suffice.

F.R.C.S.—See annotation on the subject in our present number.

PROCEDURE IN CASES OF LOCKED TWINS.

To the Editor of THE LANCET.

SIR,—In your last issue is recorded a case of locked twins, in which the application of forceps to the head of the second child effected delivery. In October, 1876, a similar case occurred in my practice, in which I adopted a treatment which appears preferable, as an alternative procedure, with success. The body of the first fœtus having been born, and all attempts to deliver the head failing, examination showed the cause of obstruction to be the interlocking of its head with that of the twin. Taking advantage of the interval between pains, I passed the delivered body and shoulders again into the uterus, and, with the fingers of the left hand upon the head of the second fœtus to prevent its descent, I delivered the first with the right hand. The children were about six months and a half, and died shortly after delivery. The mode of procedure is described in Dr. Barnes' Obstetric Operations.

I am, Sir, your obedient servant,

Woodside, Anerley-road, S.E., JOHN H. GALTON, M.D. Lond.

Jan. 9th, 1882.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were the questions on anatomy submitted to the candidates at the first anatomical and physiological examination for the membership, on Jan. 2nd, from 1 to 3 o'clock, when they were required to answer four, and not more than that number, out of the six questions:—

1. Describe the thorax as a whole.
2. Describe the different kinds of diarthrodial joints, and give examples of each kind.
3. Describe the attachments and give the relations and nervous supply of the omo-hyoid muscle.
4. Describe the anastomoses around the ankle-joint, and the course of the vessels entering into the formation of these anastomoses.
5. Describe the course and distribution of the lymphatics of the bladder, penis, scrotum, and testis.
6. Describe the course of the nerves supplying the muscles of mastication, and mention the position where they severally enter the respective muscles.

The following were the questions on physiology, to be answered from 4 to 6 o'clock:—

1. Give the structure of a medium-sized artery and vein; and compare the conditions under which the blood moves in these vessels respectively.
2. State the average air capacity of the lungs. How may this be determined? How is respiration affected by external conditions?
3. Describe the microscopical structure of a lobule of the pancreas, and the changes that take place in its cells during the different phases of their secretory activity.
4. What are the functions of the third pair of cerebral nerves? How may these functions be determined?
5. Define and explain the terms—systole, inhibition, astigmatism, summation of contraction; and distinguish between tone and quality of sound.
6. Describe the structure of the mucous membrane of the large intestine. What are the uses of the large intestine?

APPOINTMENTS AT ST. BART.'S.

To the Editor of THE LANCET.

SIR,—Your columns have from the first been open for the redress of medical grievances and the exposure of abuses in hospital management, so that no apology is required for bringing to your notice what I believe only needs publicity to ensure its condemnation and reform.

The excessive number of students at St. Bartholomew's Hospital entails the misfortune that very few of them can ever enjoy the advantages of holding appointments on the junior staff of the hospital. This staff consists of four house-physicians, four house-surgeons, an ophthalmic house-surgeon, and an obstetric assistant. These offices are of value, not only in themselves, but also as stepping-stones to permanent berths at the hospital, since it is usual to recruit the senior staff only or chiefly from the ranks of those who have served on the junior. Such being the case, it might naturally be supposed that more than ordinary care would be taken in the election of fit and proper persons to these offices, that merit would here be duly rewarded, and any suspicion of favouritism rendered quite impossible. On the contrary, however, no examination is held to test the capabilities of candidates, as at some other hospitals; little attention is paid to their previous career; there is no just recognition of merit which would stimulate to a desirable competition; but the appointments are made simply and solely by a system of taking care of their *protégés*, relations, and friends among the members of the senior staff. This method of procedure is not confined to the elections of the officers I have named, but obtains also in other appointments, which it is needless to specify. Men whose chief recommendations would seem to be their repeated appearances at the college have been preferred to others not so distinguished, but graduates of London University nevertheless, and prizemen or scholars of the hospital. If it be the desire of the staff to secure the services of "inoffensive mediocrities," to the exclusion of men of originality and intelligence, or who have failed to obtain a private introduction to those in office, their conduct is consistent enough. But there—let no one be disappointed with our future representatives!

I am, Sir, yours disinterestedly,

Dec. 26th, 1881. AN OLD BART.'S MAN.

SYPHILITIC PSORIASIS OF THE FACE.

To the Editor of THE LANCET.

SIR,—I should be glad if any reader of THE LANCET could give me a remedy for this case. J. F——, aged thirty-two years, occupation traveller, contracted syphilis two years ago, and has been under my treatment ever since. A scaly eruption first appeared on his forehead; a few months afterwards his nose and cheeks were also similarly affected, which disfigures him very much, and is a source of great annoyance to him owing to his occupation. I have given the following medicines, internally: Iodide of potassium and bichloride of mercury. Externally: Oleate of mercury, red oxide of mercury, vaseline, and mercurial baths—in fact almost everything relating to the disease, but all to no effect. Any suggestion to alleviate the above would be esteemed a favour. I am, Sir, yours, &c.,

Jan. 3rd, 1882. NEMO.

THE CASE OF DR. G. BUCHAN, OF KILMAURS.

WE are informed that the subscriptions towards the defence fund of Dr. Buchan amount at present to £11 8s. As something like £24 is still required to cover the legal costs, the list will be kept open for a short time longer.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Professor Rutherford, Edinburgh; Sir Joseph Fayrer, London; Dr. Hemming, London; Mr. Royes Bell; Dr. Ralfe; Mr. Henry Smith; Dr. Bardon Sanderson; Dr. Galezowski, Paris; Dr. Henry Payne, Ashton-under-Lyne; Mr. Thornton, London; Mr. Stevens, London; Mr. Bisshopp, Tunbridge Wells; Mr. J. G. Garbutt, London; Mr. Rideal, Aylesbury; Mr. Martindale, London; Dr. Galton, Woodside; Mr. G. P. Field, London; Dr. Wolfe, Glasgow; Mr. Nevitt; Mr. C. S. Jeaffreson, Newcastle-on-Tyne; Messrs. Dunn and Soman, London; M. Erart, Paris; Mr. Wood; Dr. Harbinson, Lancaster; Dr. Wise, London; Dr. Macgowan; Mr. Walton; Dr. Ranking, Segoulie; Dr. Norcop; Dr. Kirkman; Mr. Manning, London; Mr. Parks, Ashton, Rhode Island; Rev. S. Minton, Putney; Mr. Blackmoore; Mr. Lovegrove, Earlstown; Dr. Dudgeon, London; Mr. Godfrey, Jersey; Dr. Lloyd, Barmouth; Mr. Chadwick, Southport; Mr. T. Wells, Bayswater; Mr. Fraser, Scarborough; Mr. Evitt, Peckham; Messrs. Macmillan and Co., Cambridge; The Rev. T. C. Woodhouse, Hulme; Mr. Booth, Oswaldtwistle; Mr. Buck, Chatham; Mr. Howlett, Manchester; Mr. Barnardo, London; Mr. Parkin, Sheffield; Mr. Jones, London; Mr. Elsner, Tannus; Dr. Maclagan, London; Dr. Cobbold, London; Mr. Whitson, Glasgow; Mr. Bagenal, New York; Dr. Cullingworth, Manchester; Mr. Harries, Aberystwith; Mr. Chisholm; Mr. Carter, Redsle; Dr. Dewar, Arbroath; Mr. Lindsay, Kilmaurs; Mr. Hassall, San Remo; Dr. Warrington, Congleton; Dr. S. Saunders, London; Mr. Shirley Murphy, London; Mr. Birch, London; Dr. Buchanan, Glasgow; Mr. Allott, Heckmondwike; Mr. Blackmore, Wandsworth; Mr. Whiting, Haslemere; Mr. Sullivan, Leicester; Mr. Thomas, Gloucester; Toujours en Vedette; F. M. S.; L. S. A.; Clemens; X. Y. Z., Southsea; Chemicus, Ashford; Non-Medicus; Glasdo; An Old Assistant; Surgeon-Major; Tudor; Scriptor; F.R.C.S.; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Sharp, Syston; Dr. Mac Nab, Stirling; Mr. Collyer, Enfield; Messrs. Stent and Son, Guildford; Messrs. Garman Brothers, Bow; Dr. Cleaver, Stonehouse; Mr. Bernstein, Birkenhead; Mr. Andrew, Mossley; Dr. Kirby, Fawnley; Mr. Berridge, Loughborough; Dr. Kestoven, Holloway; Mr. Dramsfield, Penistone; Dr. Thursfield, Browaley; Mr. Oughton, London; Dr. Clark, Folkestone; Mr. Bryan, London; Mr. Smith, St. Leonards-on-Sea; Mr. Willey, Sheffield; Dr. Easby, March; Dr. Wanostrocht, Escrick; Mr. Read, London; Dr. Edwards, Hounslow; Dr. Lloyd, Barmouth; Surgeon-Major Deighton, London; Mr. Jordison, Middlesborough; Mr. Grime, Blackburn; Mr. Baber, Brighton; Dr. Chapman, Dinard; Mr. Crewes, Truro; Mr. Lattey, Kensington; Mr. Davidson, Congleton; Mr. Dean, Lincoln; B. A.; A. B., Newbury; Fortunes; W. H.; Vega; X. X. X., Aysgarth; Alpha, St. Thomas's-street; G. B. D., Everton; M. M., Clapham; Fitzgerald; H. T.; J. P., Dublin; Fidelis; H. W., Bath; Medicus, South Shields; S. W.; G. S., Bungay; Medicus, Edinburgh; Omega, London; W. E., Holloway; Medicus, Great Yarmouth; Medicus, London; Medicus, Burton-on-Trent; Chemicus, Ashford; Medicus, Sheffield; B. S.; Delta; L. M., Sheffield; 9802, Glasgow; A. B., West Ham; B., Sheffield; Medicus; J. H.; Medicus, Llandovery; &c., &c.

Lettres Médicales, British Courier, Daily Observer, Harwich and Dovercourt Newsman, Eastern Morning News, New York Times, Bucks Advertiser, North British Daily Mail, &c., have been received.

OBSCURE CASE OF SKIN DISEASE.

To the Editor of THE LANCET.

SIR,—I should be much obliged if any medical man who has had special experience of the following skin disease will favour me with advice as to treatment.

My patients are two—a husband and wife. The former, a few months ago, noticed a circular patch of skin upon his chin whiter than the rest of the skin. This has gone on increasing in size till at the present time the patch is two inches in diameter. Pigment seems to be wholly lost, and the hairs of the part are softer than on the healthy parts of the chin, and are perfectly white, whereas the moustache and beard are dark brown. As the patient wears only a moustache, this loss of pigment in the hair of the affected part is not so important, but the disease is spreading, and has hitherto resisted all treatment. He has been many years in India, and has suffered a good deal from hepatic congestion. On one occasion he has had a bad attack of hepatic colic. He suffers from violent headache occasionally. His wife's case is as follows:—

About eighteen months ago she noticed white spots on the back of her hands, which have run an exactly similar course to the spots above referred to. The margins of the patches are very irregular. The hands are so much disfigured by the white patches on her naturally brown skin (she is a brunette) that she has to wear gloves constantly. She has been in India seven years, is occasionally "liverish," but has never had a definite attack of hepatic congestion. She suffers from uterine disturbance, having "procidentia" of some years' standing, and is liable to attacks of hallucination at night, often sitting up in bed for hours and entertaining imaginary visitors. She has violent nervous headaches every now and then.

I have tried everything I can think of without the slightest benefit. I am inclined to fear that the loss of pigment must be due to atrophy, and will probably prove incurable. Two points I should be glad to be enlightened upon—1. Is this disease contagious? The occurrence in a husband and wife points to possible contagion, though of course the coincidence may be nothing more than accidental. 2. Is it parasitic? The lady is going to England shortly; if any medical man in London who takes an interest in such cases will communicate with me at once, I will arrange for my patient to pay him a visit.

I am, Sir, yours truly,

6th Bengal Cavalry, Segowlie, Bengal, Dec. 16th, 1881. GEORGE S. RANKING.

TOWN AND COUNTRY.

To the Editor of THE LANCET.

SIR,—Permit me to draw your attention to the enclosed paragraph in the *Eastern Morning News*, which also appeared in the *Hull Express* on the same day. If it be an advertisement, it surely must be unique.

I am, Sir, yours truly,

Jan. 6th, 1882. M.D.

"Hull has, indeed, reason to be proud of the medical talent in its midst. *Apropos* of this, a good story has just reached me. A gentleman in Hull, suffering from an eye complaint, sought the advice of a local medical man, who recommended the performance of an operation. This the patient flatly refused to undergo, at least in Hull. Rather than that, he would proceed to London, and become a paying patient in one of the hospitals, where, if he had to be operated upon, he supposed that he would entrust himself to the care of something more than a provincial physician. He went. After he had spent several pounds in expenses, an operation was ordered. He consented, reluctantly, it is true, but still with a feeling of confidence. But great was his surprise, when the time for the operation arrived, to find that the physician who stepped forward to perform it was no other than his Hull friend. Need I say that those present witnessed an amusing tableau. But the Hullite no longer demurred. In a few days he found himself not only with eyesight fully restored, but with a much better opinion of the Hull faculty."

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